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FDI WORLD DENTAL CONGRESS 2018 IN BUENOS AIRES: VAMONOS!

Dr. Gerhard K. Seeberger, President Elect of FDI and President of ADI.

Every FDI World Dental Congress is unique and so is its meeting place. This year it will be the world metropolis Buenos Aires to attract the dentists from over 140 countries with its magic architecture, art, cuisine, culture, music and traditions, and to call all colleagues to participate in a cutting-edge scientific program, hot-topic fora and sessions. The congress-slogan says it all: A passion for many, a commitment for all!

This year's World Dental Congress of the FDI World Dental Federation will be held in the prestigious convention center La Rural of Argentina's Capital, from September 5th to September 8th. The Congress expects 15.000 participants and more than 300 exhibitors from all over the world. It offers a rich scientific program with front lectures, hands-on courses, symposia, workshops, free communications and poster presentations. World renown speakers from South America and from all over will lecture on the hot topics in dentistry. No aspect of a modern, responsible and patient-oriented practice is missing. Its variety goes from the link to other medical specialties, the correct use of ultimate technology, economics and sustainability, as well as ethics and legal demands in dentistry, and a lot more. All scientific sessions are available in English and Spanish.

The program is available at **http://www.worlddentalcongress.org/panel/datas/genel/files/fdi2018_scientific_programme.pdf**

Since 2012, when FDI launched its very successful World Oral Health Forum, WOHF, at its 100th World Dental Congress in Hong Kong, it has attracted an increasing number of participants during the years. The WOHF follows the model of the World Economic Forum Annual Meeting in Davos. It is in line with FDI's Vision 2020 initiative to shape the future of oral health and takes place every year during the World Dental Congress. Its sessions typically include short presentations from the panelists – relevant to dentists, but also society at large – and are followed by questions and answers.

The WOHF seeks to expose FDI members to matters usually not discussed in dental congresses; while attracting audiences who might not regularly attend dental events.

At this year's WOHF on September 5th Dr. Sophie Dartvelle, a member of the FDI Public Health Committee and of the Oral Health for Ageing Population Task Team, and Prof. Kakuhiro Fukai, a member of the Japanese Dental Association and Chair of the Oral Health for Ageing Population Task Team, will illustrate the strong link between oral health and healthy ageing through a series of real-life examples of elderly oral healthcare models from Asia, Europe, and South America.

Every FDI World Dental Congress is unique and so is its meeting place.

Another highlight in the Buenos Aires program will be the joint session on sugar lead by the FDI, the WHO and the NCD-Alliance on September 7th. Its title: Curbing the Sugar Rush: Tackling Oral Diseases and

Other NCD's Through a Unified Approach. The speakers are Dr. Esperanza Cerón, the Executive Director of the civil society organization Educar Consumidores, Dr. Stefan Listl, a dentist, economist, professor and member of the FDI Vision 2020 Think Tank, Dr. Veronica Schoj, Director of Health Promotion and NCD Control at the Argentine Ministry of Health and Dr. Benoit Varenne, the Oral Health Programme Officer in the NCD Prevention Department at WHO headquarters and leader of WHO's work on the oral health global agenda.

The presentation of the FDI Dental Ethics Manual 2 on September 7th is also part of the program and will involve its authors Dr. Ward van Dijk, Dr. Michael Sereny and Dr. Jos Welie.

The FDI Business Meetings of the World Dental Parliament will be held from August 31st to September 8th. Council, Committee, Task Team, Section and Working Group members, together with 300 delegates from all National Dental Associations, will set the course to successfully fulfill FDI's Mission through advocacy, knowledge transfer and recognizing the needs of its members.

We all, together with FDI President Dr. Kathryn Kell, wish the 2018 World Dental Congress the most of success and we are proud of the strong commitment of the Local Organizing Committee formed by members of the Confederación Odontológica de la Republica Argentina, CORA, lead by its President Dr. Guillermo Rivero, and all the colleagues from the Latin American Regional Organization of FDI, LARO.

Dr. Gerhard K. Seeberger
FDI President-elect

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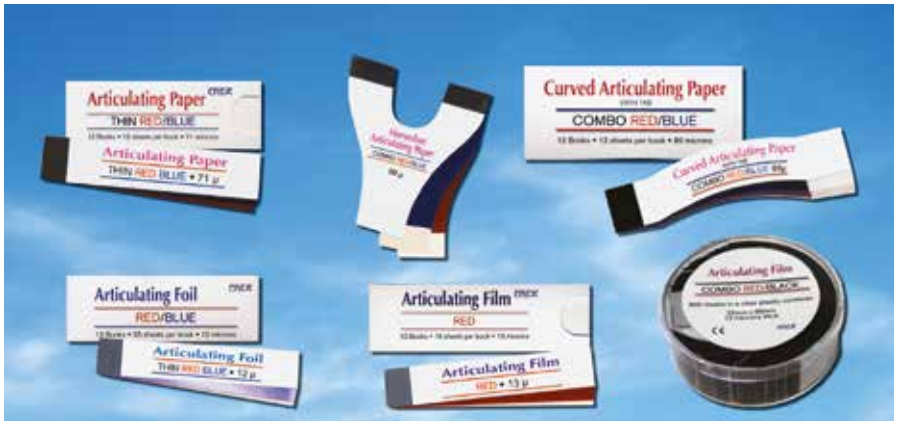

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Focus

Argentina's Public Health Transformation

Author: Silvia Borriello
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Argentina's health sector has gone through major transformations in the years with a reduction of state involvement in social services in favor of privatization and decentralization of healthcare, resulting in increased fragmentation, inequity and inefficacy. Nonetheless, as the new government addresses current economic challenges, together with the enhancement of much needed public health policies based on equity and efficiency, opportunities will increase.

Nestled next to Chile to the west, Uruguay, Paraguay, Brazil and Bolivia to the east and north, the Argentine Republic is the second largest country in South America covering an area of 2,780,400 km2 in the southern tip of the continent. Its capital, Buenos Aires, is located on the east next to Uruguay and the Atlantic Ocean. In the second half of the 19th century and first half of the 20th century Argentina received a huge influx of immigration from virtually all countries of Europe, intermixing with the existing population. In recent times, immigration comes primarily from neighboring countries (Paraguay and Bolivia) with strong Amerindian ancestry. Currently, about 50% trace their origin to Italian immigrants and 25-30% to Spaniards.

With a population of over 44 million, Argentina is a federal republic with a presidential system and 24 political jurisdictions (23 provinces and the autonomous City of Buenos Aires, site of the national government). Each province has its own constitution and elects its governing officials (but exist under a federal system).

Population (2018)

44,688,864

2.4 % of the population is indigenous, with 31 indigenous groups across the country

Living in urban areas

91%

Nearly 65% of the population concentrated in the Centro region, particularly in the province of Buenos Aires, where 38.9% of the country's population lives, more specifically, in the Autonomous City of Buenos Aires (Ciudad Autónoma de Buenos Aires or CABA) and surrounding area

Argentina's President
Mauricio Macri,
since 2015

GDP (current US$),
2015 - **594** billion

GDP per capita
(current US$)
14,402

• Argentina's school system has a good reputation internationally. At just under 99%, the country has one of the highest levels of literacy among all Latin American countries

• Argentina has recently returned in force to the world stage, hosting the 2017 World Economic Forum on Latin America and the 12th World Trade Organization Ministerial Conference. In 2018, it is set to assume the presidency of the G20, the international forum that brings together the world's 20 leading industrialized and emerging economies

• Because of its geographic location and productive structure, Argentina is one of the countries most affected by global warming. If current trend continues, forecasts for the 2080s project potential increases of up to 4°C in the north of the country and 2°C in the south, bringing higher levels of hydric stress, drought and increased desertification

At the beginning of the 20th century, Argentina's economy boomed, but political and economic crisis were recurrent. The economic crisis was eventually brought under control by 2004 and economic growth resumed but poverty continues to be prevalent and the distribution of income remains highly unequal. In the first half of 2017, according to official statistics, 28.6% lived in poverty, while 6.2% were in extreme poverty. The Macri government has made some progress in the reforms towards an open market economy and is continuing in this direction, but Argentina continues to have one of the most restrictive and repressed economies, with very high and inefficient public spending; ranking among the twelve countries with the highest tax burden and remaining one of the weakest emerging market economies. The significant economic setbacks of the 1990s increased concentration of wealth in fewer hands, affected employment and quality of life and rendered health systems less able to provide equitable services to most people. **Consequently, the policies of**

Total private health care expenditures represent close to 3% of GDP, of which approximately two-thirds is in the form of direct payments

ARGENTINA	Year 2000	Year 2012
Private expenditure on health as % of total expenditure on health	46.1	30.7
Out-of-pocket expenditure as % of private expenditure on health	63.0	65.5
Private prepaid plans as % of private expenditure on health	30.7	25.9

Source: World Health Statistics 2015

- Number of doctors (2013) - 167,934
- Physicians density per 1,000 population (2007-2016), comparative figures:
  - Argentina 3.9
  - USA 2.6
  - Brazil 1.9
- Nurses per 10,000 inhabitants (includes professional nurses and licensed nurses), 2004 - 3.8
- Number of healthcare facilities with hospitalization. All subsectors (2017) - 5,178
- Number of healthcare facilities without hospitalization. All subsectors (2017) – 20,326
- Radiotherapy units per million population (not specified if public and/or private), comparative figures, 2013:
  - Brazil 1.7
  - Argentina 2.8
  - USA 12.4
- Percentage of population not covered by *obra social* or medical plan, 2010 - 36.1%

Sources: Ministerio de Salud, Dirección de Estadísticas e Información de Salud (Argentina) / WHO – World Health Statistics 2016-2018

the last quarter of the 20th century drastically changed the landscape of the health system, which regressed from that of a publicly funded health system, to one in which the interests of private for-profit corporations became prevalent.

Structure of the Health System

Argentina's health system is one of the most fragmented and segmented in the Region of the Americas. It is organized around three main providers, the public and private sectors and the social security sector. **Its fragmentation is largely determined by the country's federal structure, in that each of the 23 provinces functions independently and has constitutional responsibility for the leadership, financing and delivery of health services. Consequently, there is no common framework for the respective responsibilities and functions in healthcare of the national government and of the provinces.** This fact, plus the lack of political will throughout the 20th century, allowed the primacy of the vested interests of private sectors and trade union bureaucracy to impede the development of a unified public national health system. During the economic crisis of the 1980s and 1990s, the public system was further reduced and health

services further privatized and transferred to the provinces, increasing their fragmentation, segmentation and inequity. Reliance on the public sector is higher as income declines, and inversely for the private sector. Its mixed health system is a combination of:

(a) The remnants of an old welfare state with an extensive network of public hospitals and health centers. The public sector is composed of the national and provincial health ministries, plus a network of hospitals and primary care centers that provide free care to anyone who needs it, although these services are used mainly by persons in lower income groups, generally lacking social security coverage or cannot pay out-of-pocket for services. This sector is financed mainly through taxes, but users can be asked for a minimal fee for service. A very important free provision of drugs program operates through these providers. This sector covers about 47% of the population, including patients that can afford to go private but choose to have procedures in a public setting due to the expense or high premiums in the private sector.

(b) A social health insurance system for formally employed workers. The compulsory social security sector has the highest fragmentation of all and is organized around national and provincial *obras sociales* (mutuals or social plans) administered by trade unions. There are more than 300 of such entities organized at national and subnational levels, charged with overseeing medical care for Argentine workers and their families. Most of the *obras sociales* operate mainly through contracts with private providers and are financed with compulsory contributions from employees (3%) and employers (6%). Health coverage level is fixed by law in the Mandatory Medical Program (Programa Médico Obligatorio - PMO), covering the cost of medical care and medicines in varying proportions; differences between the fixed fee and the actual cost of treatment is paid by the patient. In the past, these plans have usually covered around

Argentina has a tradition of excellence in academic medicine, human resources education and biomedical research.

Consolidated Public Health Expenditure, 2012

- Total public health expenditure (as % of GDP): 7.73%
- Public healthcare (as % of GDP): 3.00 %
- Obras Sociales (as % of GDP): 3.49 %
- INSSJyP - National Retired and Pensioners Social Services Institute (as % of GDP): 1.24 %

Source: Elaboración propia en base a datos del Ministerio de Hacienda y Finanzas Públicas de la Nación. National Ministry of Public Finance

Total health expenditure per capita, comparable figures, 2015

Mexico	535 USD
Brazil	780 USD
Argentina	**998 USD**
Uruguay	1,281 USD
USA	9,536 USD

Source: WHO-World Health Statistics 2018

- Life expectancy at birth (2016) - 76.9 years
- Births attended by trained personnel, 2015: 99.6 %
- Maternal Mortality (per 10,000 live births), 2015 - 3.9 deaths, ranging from a high of 8.1 in Salta to a low of 1.9 in CABA, Santa Fe and La Pampa
- Infant Mortality (per 1,000 live births), 2015 - 9.7 deaths
- Neonatal mortality rate (per 1,000 live births), 2015 - 6.6 (Brazil 7.2, USA 3.7)
- Postnatal mortality rate (per 1,000 live births), 2015 - 3.1
- Mortality rate attributed to cardiovascular disease, cancer, diabetes or chronic respiratory disease between age 30 and exact age 70 (%),2016:
  - USA 14.6
  - **Argentina 15.8**
  - Brazil 16.6

Source: WHO-World Health Statistics 2017 and 2018/ Ministerio de Hacienda y Finanzas Públicas de la Nación. Argentina Ministry of Public Finance

42-45% of the population, although the percentage has fallen recently due to increasing unemployment – with more people resorting to provision within the public sector.

In addition, through the Mandatory Medical Program (PMO), the National Institute of Social Services for Retirees and Pensioners (INSSJyP) provides coverage for retirees in the national pension system and their families, covering 20% of the population.

(c) A concentrated for-profit private health insurance sector ('prepaid medicine'), providing services to middle-upper and upper classes. The private sector consists of health professionals and facilities that offer services to individuals who pay out-of-pocket, to beneficiaries of the *obras sociales* and private insurers through prepaid medical plans. This sector also includes more than 100 voluntary insurance entities known as medical prepayment companies; they are financed through premiums paid by families or companies and by funds from contracts with *obras sociales*. Private insurance entities serve around 8% of the population and operate similarly to social insurance, using PMO as reference standard of minimum level of coverage. Total private health care expenditures represent close to 3% of GDP, of which approximately two-thirds is in the form of direct payments (particularly for the purchase of medications) by people at the time services are provided.

The national *obras sociales* and the medical prepayment companies, under the supervision of the Superintendency of Health Services (SSS, for its Spanish acronym) must meet the requirements of the PMO (Programa Médico Obligatorio), which provides a broad package of services and associated drugs. **The program covers 95% of outpatient, surgical, hospital and dental services, as well as mental health, rehabilitation and palliative care services. It does not apply to the private sector, however, which lies outside the medical prepayment system and the public sector**; the private sector is regulated at the provincial and municipal levels and provides services that are set by the various provincial ministries of health. The three health sectors are increasingly overlapping, with potential conflict of interests of health professionals.

The health system's fragmentation falls into three broad areas: *coverage* - since not all the population has access to the same health benefits and services; *regulatory functions* - since leadership and regulatory authority are spread throughout 24 jurisdictions and various subsectors; and *geographic disparities* - given the extreme economic-development differences from region to region. The national health authority—given the resources it administers and the country's federal structure— does not have sufficient power to impose legislative changes. The only way to effect such changes is through broad consensus, something that has been attempted through federal health plans and by strengthening the role of the Federal Health Council (COFESA).

The segmentation and fragmentation of the health system of Argentina are the main factors behind its low efficiency and its inequities in access and in quality of care. At the same time, segmentation and fragmentation has been the environment that the different players (organized medicine, owners of private hospitals, obras sociales, private health insurers, pharmaceutical and medical technology industries and others) have found and thrived on, maintaining the status quo and preventing the development of a unified national health system. Furthermore, there is concentration of eco-

Severe Chronic Periodontitis

Average prevalence among those 15 years or older per country, 2010 estimates

- **Argentina: more than 15.0%** (same as most Latina American countries like Chile, Brazil, Bolivia, Peru, Venezuela, Uruguay, Paraguay, Colombia, Ecuador)
- Between 10.1% - 15.0%: Italy, Germany, Switzerland
- 10% or less: Spain, France, U.K. USA

Oral Cancer

Incidence per 100,000 population of oral and lip cancer among those 15 years or older, 2012 estimates

- Between 5.0 - 6.9: USA, France, Germany
- **Argentina: between 2.5 - 4.9** (together with Uruguay, Brazil, Bolivia, Venezuela, Colombia, Italy, Spain, U.K.)
- Less than 2.5: Chile, Peru, Ecuador

Source: "The Challenge of Oral Disease, a Call for Global Action" The Oral Health Atlas, Second Edition FDI World Dental Federation 2015

Argentina's main challenges in dentistry are the need for therapeutic-technological advances as well as equal access to oral health treatment for the whole population.

Number of Dentists	35,944 (SOURCE: WHO, 2001)	48,000 - 50,000 (SOURCE: FDI/CORA. 2018)
Dentists every 10,000 inhabitants	9.3	SOURCE: Ministerio de Salud, 2004 (Argentina)

Global availability of dentistry personnel

Number of dentists and other oral health personnel per 1 million people, comparable data (latest available 2000-2013)

1,000 or more	Brazil, USA, Canada, Cuba
Between 500-999	**Argentina, Uruguay, Paraguay Italy, France, Germany, U.K.**
Between 100-499	Peru, Bolivia, Spain

Source: "The Challenge of Oral Disease, a Call for Global Action" The Oral Health Atlas, Second Edition FDI World Dental Federation 2015

nomic and political power in the trade unions as administrators of the *obras sociales* with little or no oversight and margin for corruption. There are 3.9 physicians and 3.2 hospital beds per 1,000 inhabitants in the country overall, with significant differences between jurisdictions and a relative excess of highly skilled physicians, hospitals beds and medical technology in big cities. The Autonomous City of Buenos Aires, for example, has 10.2 physicians and 7.3 beds per 1,000 inhabitants, compared with 1.2 physicians and 1.1 beds in the province of Misiones.

The country has 5,178 inpatient health care facilities with a total of 161,570 hospital beds, about 50% of which belonging to the public sector. The national ministry of health administers only four national hospitals, the remainder are run by the provinces and municipalities. 47% of hospital beds are in the private sector, while the remaining 3% belong to *obras sociales*. **The public hospital network is open to anyone and nominally free of charge however, for the past several decades little has been**

done to strengthen the public system, which is clearly underfinanced and deteriorated with numerous access barriers and quality of care inequalities. Still, there are some niches of excellence in specific specialties, which are sought even by middle and upper classes. In fact, one-third of the patients that receive care in the public sector have some type of social security coverage and 5.2% are covered by private health insurance. Public hospitals are further characterized by long waiting lists for treatment and surgery; adding to the pressure is the deficiency of primary care professionals and nurses which results in ineffective referring and overconsumption of primary care leading to higher (unnecessary) hospitalizations. Such fragmented healthcare system and a lack of "set" national standards for quality of care results in significant differences in terms of clinical practices and resources from province to province. For example, urban areas like Buenos Aires has a wide array of high quality and modern healthcare facilities to choose from, while rural provinces like Jujuy remain underserved, resulting in some of the poorer and rural populations not getting even their basic healthcare needs met.

Outpatient facilities amount to 20,326 both public and private for outpatient care. **Although the largest number of beds belongs to the state subsector, in terms of medical care and billing, private services concentrate 2/3 of the economic movement.**

Argentina has a tradition of excellence in academic medicine, human resources education and biomedical research. There are 21 public and 24 private medical faculties with high quality technical and scientific training. In recent years, private financing for scientific activity has steadily increased, though the public sector remains the most important source of funding; the National Scientific and Technical Research Council (CONICET) awards most of the country's fellowships for basic and applied research. Currently, 30.3% of the institution's researchers are working in the biomedical sciences, with their numbers having increased by more than 200% in the last 12 years.

Argentina spends on average 7 to 8% of its GDP on health care services, one of the highest levels in Latin America. Although the population as a whole has access to the services offered by the public sector, the achievements seem meager compared to the resources allocated to the sector, with significant gaps particularly in distribution of coverage and access to services. Healthcare expenses are also rising rapidly and threatening the viability of public health insurance systems as well as inflating the out-of-pocket costs for patients. Among the reasons are ageing of the population, which is increasing need for care (e.g. chronic diseases) and contributing less in terms of financial resources; the increasing awareness of quality standards for care delivery; the limited tertiary care infrastructure and resources as well as inequalities in care provision and staff training between the public and the private sector. Per capita spending in the public sector is much lower than in the social security system, and both much lower than in the private sector. The latter serves the upper-middle and upper classes, who enjoy a level of medical care like that found for the wealthy in developed countries.

Population Health

Argentina, as do other middle-income countries in the Region, faces poverty-related health problems. Improvements in living conditions, along with developments in vaccines and antibiotics and implementation of control programs especially among marginal populations, will help reduce indicators of morbidity and mortality from various communicable diseases. A noteworthy initiative to address poverty-related factors is "Toward Universal Health in the South American Chaco Population 2016-2019" a joint project developed by Argentina, Bolivia, Brazil and Paraguay primarily among indigenous, native, rural and mestizo populations.

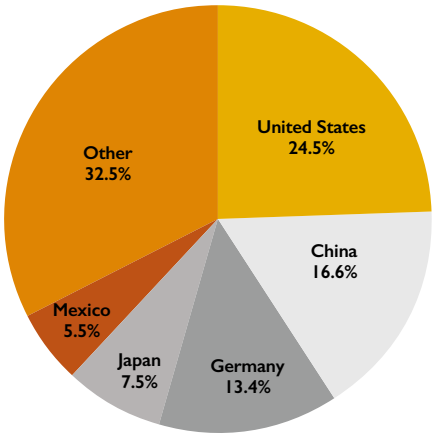
The country is facing a dual scenario in which infectious diseases coexist with a steady increase in the prevalence of chronic, noncommunicable diseases and their risk factors. A major challenge is still the creation of strategies to combat HIV/AIDS and tuberculosis. As the population in Argentina continues to age, the number of chronic diseases and morbidities is growing and increasing the demand for services in the healthcare system, resulting in increasing loss of coverage. The most coveted services are in orthopedics, dentistry and cardiology. Changing lifestyles are also contributing to the increased incidence of chronic illness such as overweight and obesity which are considered a challenge, requiring improvements in existing prevention programs. These factors coupled with the delicate economic climate will pose an increasingly significant challenge in the years to come.

Recent Reforms

In an attempt to address many of the mentioned challenges, old and new, the country has the advantage of a rich history of social policy, great human capacities and talent, solid institutions and a level of health spending higher than the regional average. The country is in fact taking measures towards a more integrated and equal heath care system. Among the reforms, the Federal government's "Plan Remediar" provides free outpatient drugs by ensuring essential drugs to the more vulnerable population. Since its creation the plan has continuously expanded to include more varied medications and accessibility to more types of patients, with the aim of helping those living under the poverty line, not covered by a social work program. The Birth Plan or "Plan Nacer" has the main goal to decrease infant, child and maternal mortality rates as well as to provide incentive framework through a performance and accountability program called the "Maternal and Child Insurance Program (MCHIP)", that links results to the allocation of resources in different provinces. New regulations on private insurance coverage (i.e. premium control) have come into force causing significant amount of discussions and hesitation in the industry. Many plans for investment and expansion have been put on hold and private investment is expected to decrease by over 50%.

To benefit trade, the new government has moved with significant speed to implement core reforms such as the unification of the USD exchange rate (removal of government exchange control), the agreement with international creditors, the elimination of import restrictions, modifications were also made to the original medical device law to achieve a more straight-forward and structured medical device registration process. It has removed limitations on dividend repatriation

2014 MARKET SHARE



Source: export.gov

and floating and has reformed the national statistics system. Growth will greatly depend on the overall investment climate and on government policy responses after reducing subsidies and combatting a 20-30% projected inflation.

Market Trend

Argentina has unique economic, demographic and cultural characteristics that distinguish it from other Latin American countries and as the government addresses its current economic challenges, opportunities will increase.

Its medical equipment and device market is dominated by imports, accounting for around 70% of the total market. Over 2,000 companies sell medical and dental products and equipment in Argentina, of which 25% are manufacturers and 75% importers. Brazil poses strong competition since imports enjoy a zero percent tariff under Mercosur. The United States is among the leading suppliers of imported medical products with a 27% market share with Japanese and European-made equipment, particularly in high-technology and precision. Domestic production has been growing, although in general, it is limited mainly to lower-middle range equipment and supplies. **For any medical product or equipment that cannot be manufactured locally, export opportunities continue to exist particularly if exporters can offer high quality products at competitive prices.** In this competitive market, the demand for simpler technology is predominantly met within the domestic market. Local dental companies offer value-priced products, with a great deal of tariffs and expenses preventing, in some cases, international competitors from penetrating the market.

Despite the delicate economic situation and the decreased availability of funds, there are still opportunities for investment in Argentina's healthcare system driven by increased demand. The need for better cost/benefit relationships, updating of equipment and the transition to new pricing and service models present additional opportunities. Among the areas that are most in need of advancement are diagnostic equipment and minimally invasive procedure equipment. Furthermore, modernization is taking place reflecting an increase in medical tourism with Argentina offering high standards of cosmetic surgery at much lower prices that many European and U.S. centers. Imported medical products need to be registered with ANMAT (Administración Nacional de Medicamentos, Alimentos y Tecnología Médica) through an authorized, local medical importer. The product registration process may take from 6 to 24 months. ANMAT, is the Argentine agency responsible for regulating registration of medical products, biological products, dental hygiene products, healthcare sanitation and disinfectants, personal hygiene, cosmetics and perfumes, foods and dietary supplements and medicines (www.anmat.gov.ar).

Perspectives in Oral Health

Argentina's main challenges in dentistry are the need for therapeutic-technological advances as well as equal access to oral health treatment for the whole population. **There are between 48,000 to 50,000 dentists in Argentina (FDI/CORA figures), mostly occupied in private clinics with oral healthcare being basically on demand and very much depending on a patient's health coverage (*Obra Social* or prepaid medicine). Due to poor income standards, the bulk of the population does not have the financial means for expensive dental procedures; as a result, its dental market is disproportionately driven by cost-sensitivity.** This is the case, for example, with implant fixtures and final abutments. In fact, while CAD/CAM custom abutments and computer-guided surgery are the most notable emerging technologies on the market in Latin America, Argentina sells the fewest units of CAD/CAM abutments, as a direct result of its economic incapacities. Nonetheless, growth is expected as the technology becomes more affordable and developed. **Its oral hygiene industry, after a phase of declining sales trend, is also expected to grow and expand in coming years due to increased demand by consumers as result of economic recovery. According to the World Bank, Argentina's economy recovered and grew 2.9% in 2017 and throughout the first months of 2018 this recovery has continued.** With rising disposable income along with economic recovery increasing the GDP per capita, the consumer's lifestyle changes, will lead to an increasing demand and choice of products which will also boost demand for sophisticated dental appliances. Growth will be greatly influenced by companies' promotional practices, such as innovation and advertisement as well as by the government's market-oriented policies. Among them, the government's welfare policies have helped the oral care market to grow as it has entered into a price agreement with leading companies that causes the prices of some oral care products to rise below the rate of inflation. **Although the market is expected to grow at lower pace during 2015-2020, in value terms compared to 2010-2015, the innovation and launch of new products along with online**

selling is expected to play a major role in boosting the oral care market.
There is little data available on oral health in Argentina, however is seems that dental caries, gingival affections, malocclusions and oral cancer are pathologies that still put at risk the oral health of a high percentage of the country's population, particularly in less accessible contexts.
A survey, published in 2010, to determine the oral health situation of a population of six-year-olds in a city of Buenos Aires province (Berisso) shows that the overall prevalence of caries was 70% for both temporary and permanent dentition, higher than in other Argentinean studies performed in the 1980s and 1990s. This fact implies deterioration compared to an earlier time in similar territories and far from the World Health Organization global goals. Furthermore, oral health indexes in Berisso were worsening in children from higher to lower socioeconomic positions and the differences between employees' children and manual workers' children were statistically significant in caries indexes for permanent dentition. The results of this study show that there is an urgent need to strengthen the effectiveness of proven preventive actions to prevent the further deterioration of oral health. The study was carried out on 804 schoolchildren from public and private schools. For temporary dentition, the prevalence of tooth decay was 67.9% and for permanent dentition was 16.3%. The restoration index was 17.6% for permanent dentition. 54% of children had never attended a dentist and 46% had attended once or more. For children who had attended a dentist, 71% attended state public services, 27% private services and 2% attended both.

According to research, there are 9 state universities and 5 private universities in dentistry. More than 90% of students attending college in Argentina attend public universities that are highly subsidized by the government. Tuition is free to all students regardless of their financial status and academic achievements. There are no dental hygienists in Argentina.

DENTAL SCHOOLS

Dental Schools per country (2014)
- 50 or more: USA, Brazil

- Between 10 - 49:
Italy, U.K, France, Germany

- Between 2 - 9
Argentina, Chile

Source: "The Challenge of Oral Disease, a Call for Global Action" The Oral Health Atlas, Second Edition FDI World Dental Federation 2015

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Universidad Nacional De Cordoba (Public University)	DENTAL SURGEOM (60 Months)	Estafeta N°32-Ciudad Universitaria, Pabellon Argentino 5000, Cordoba Province: Cordoba	https://www.unc.edu.ar/
Universitad Nacional Del Nordeste (Public University)	DENTAL SURGEOM (60 Months)	Calle Cordoba 794 - 3400 Corrientes Province: Corrientes	http://www.unne.edu.ar/
Universidad Nacional De La Plata (Public University)	DENTAL SURGEOM (60 Months)	Avda 51 Entre 1 Y 1151900 La Plata Province: Buenos Aires	https://unlp.edu.ar/
Universidad Nacional De Rosario (Public University)	DENTAL SURGEOM (60 Months)	Santa Fe 3160 - 2000 Rosario Province: Santa Fe	https://www.unr.edu.ar/
Universidad Nacional De Tucuman (Public University)	DENTAL SURGEOM (60 Months)	City: San Miguel De Tucuman Province: Tucuman	Tel +54 81 227 589 http://www.unt.edu.ar/
National University of Cuyo (Public University)	DENTAL SURGEN (60 Months) DENTAL ASSISTANT (24 months)	City: Mendoza Province: Mendoza	http://www.uncuyo.edu.ar/
National University of Lomas de Zamora (Public University)	TECHNICIAN IN DENTAL PROSTHESIS (48 months)	City: Lomas de Zamora Province: Buenos Aires	http://www.unlz.edu.ar/
National University of Formosa (Public University)	TECHNICIAN IN DENTAL PROSTESIS (36 months)	City: Formosa Province: Formosa	http://www.unf.edu.ar/
University of Mendoza (Private University)	DENTAL SURGEOM (60 Months)	City: Mendoza Province: Mendoza	http://www.um.edu.ar/es/
John F. Kennedy Argentinian University (Private University)	DENTAL SURGEOM (60 Months)	City: Buenos Aires Province: Capital Federal	https://www.kennedy.edu.ar/
Catholic University of Cordoba (Private University)		City: Cordoba Province: Cordoba	https://www.uccor.edu.ar/home/
Catholic University of La Plata (Private University)	DENTAL SURGEOM (60 Months)	City: La Plata Province: Buenos Aires	https://www.ucalp.edu.ar/
University of Salvador (Private University)	DENTAL SURGEOM (60 Months)	City: Buenos Aires Province: Capital Federal	http://medi.usal.edu.ar/medi_inicio

Source: http://studyargentina.com/program/dentistry.html

TRADE EXHIBITIONS

Dental Exhibition - Expodent

Date: June 6-9, 2018
Exhibition Venue: La Rural, Buenos Aires
Organized by C.A.C.I.D. (Cámara Argentina del Comercio e Industria Dental)
http://cacid.com.ar/home/ppal
http://expodentbuenosaires.com.ar/

ExpoMedical

"16th International Show for Products, Services and Equipment"

Date: September 26-28, 2018
Exhibition Venue: Centro Costa Salguero, Buenos Aires
www.expomedical.com.ar

ETIF

"10th Congress and Exhibition for Pharmaceutical, Biotechnological, Veterinarian and Cosmetic Science and Technology"

Date: October 16-18, 2018
Exhibition Venue: Centro Costa Salguero, Buenos Aires
http://www.etif.com.ar/index_en.php

Sources:
-Extracts from: "The Health System in Argentina" By Dr. Alice Gerges Geagea, Director of Health Education. Lebanese Health Society, Published in Human & Health, no. 29 – Autumn 2014
-Extracts from Pan American Health Organization /WHO: https://www.paho.org/salud-en-las-americas-2017/?p=2706
PAHO is the specialized international health agency for the Americas. It works with countries throughout the region to improve and protect people's health. PAHO engages in technical cooperation with its member countries to fight communicable and noncommunicable diseases and their causes, to strengthen health systems, and to respond to emergencies and disasters. PAHO wears two institutional hats: it is the specialized health agency of the Inter-American System and also serves as Regional Office for the Americas of the World Health Organization (WHO), the specialized health agency of the United Nations.
- Pan American Health Organization, "Transformando los servicios de salud hacia redes integradas: elementos esenciales para fortalecer un modelo de atención hacia el acceso universal a servicios de calidad en la Argentina". Buenos Aires: PAHO; 2017. Available from: http://iris.paho.org/xmlui/bitstream/handle/123456789/34027/9789507101281_spa.pdf
-Arce HE. Organización y financiamiento del sistema de salud en la Argentina. Medicina, Buenos Aires 2012;72(5):414–418. Available from: http://www.scielo.org.ar/pdf/medba/v72n5/v72n5a11.pdf.
-The World Bank - http://www.worldbank.org/en/country/argentina/overview
-Ministerio de Salud, Dirección de Estadísticas e Información de Salud (Argentina Ministry of health). Indicadores básicos. Buenos Aires: DEIS; 2017. Available from: http://deis.msal.gov.ar/index.php/indicadores-basicos
- Extracts from "Healthcare Challenges and Reforms in Argentina", by Ritza Suazo: https://www.tforg.com/how-we-think/sweetspot-blog/2015/04/16/healthcare-challenges-and-reforms-in-argentina/
-Extracts from: https://www.export.gov/article?id=Argentina-Healthcare and https://www.export.gov/article?id=Argentina-medical-technology
About export.gov – Prepared by U.S. Embassies abroad. With its network of 108 offices across the United States and in more than 75 countries, the U.S. Commercial Service of the U.S. Department of Commerce utilizes its global presence and international marketing expertise to help U.S. companies sell their products and services worldwide.
- "Is Equity of Access to Health Care Achievable in Latin America?" For full text: https://www.valueinhealthjournal.com/article/S1098-3015(11)01453-7/pdf
- "The Challenge of Oral Disease, a Call for Global Action" The Oral Health Atlas, Second Edition FDI World Dental Federation 2015
- Extracts from "Emerging Technologies And Price Cuts Push The Latin American Dental Implant Market Forward" By Salma Mashkoor and Kamran Zamanian, Ph.D, iData Research Inc, for full text: https://www.meddeviceonline.com/doc/emerging-technologies-and-price-cuts-push-the-latin-american-dental-implant-market-forward-0001
- FDI World Dental Congress: http://www.worlddentalcongress.org/panel/datas/genel/files/fdi_insert_web_en_new.pdf
-Oral health in 6-year-old schoolchildren from Berisso, Argentina: falling far short of WHO goals. Full text, https://www.ncbi.nlm.nih.gov/pubmed/19680177
-"Consumer Behaviour to Boost Growth in Argentina Oral Hygiene Market: Ken Research", full text: https://www.kenresearch.com/blog/2016/09/argentina-oral-hygiene-industry-market-size/
-WHO-World Health Organization, Global Health Observatory data, -WHO-World Health Statistics 2018 / 2015 / 2017

Neuropathic pain due to section of inferior alveolar nerve after implant placement

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Introduction

This paper presents the case of a 74-year-old woman with a complicated clinical picture of chronic neuropathic pain, secondary to a dental implant. Due to the patient's age and the type of pain, the prognosis was quite guarded, as the literature and clinical experience demonstrate that it tends to become chronic and is difficult to resolve, with results that leave much to be desired1-3.

The case needed to be approached by implementing new techniques to treat this type of pain and achieve an effective response for these patients.

One of the therapeutic alternatives could be the patient's neurofunctional recovery by means of localised nonablative radiofrequency treatment, also known as diathermy or Tecartherapy 4-6.

Key words: *neuropathic pain, complication, implant, neurofunctional recovery, nonablative radiofrequency.*

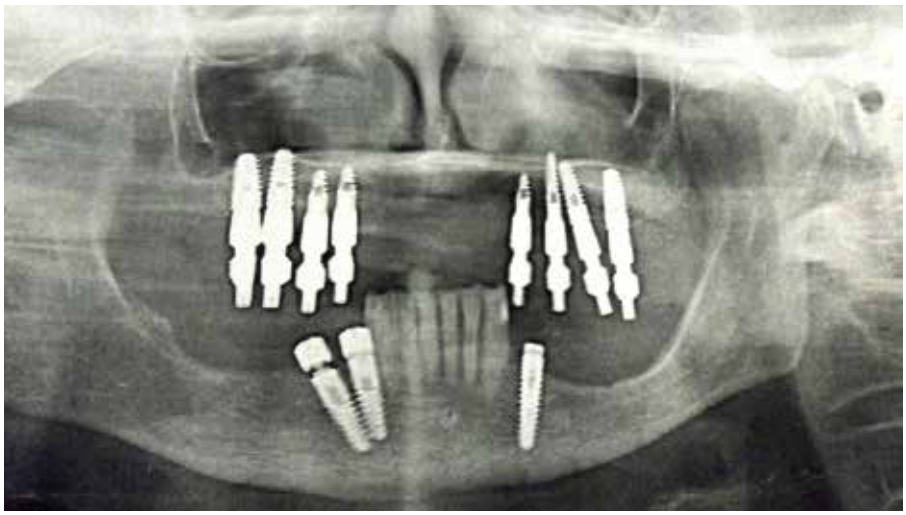

Fig. 1. A panoramic x-ray revealed implants in 27, 26, 25, 24, 14, 15, 16, 17, 34, 45 and 46. The patient presented scant separation to the inferior alveolar nerve in the third quadrant due to inferior maxillary atrophy caused by the absence of teeth.

Figura 1. *Se observan implantes dentales en 27, 26, 25, 24, 14, 15, 16, 17 34, 45, 46. Y la escasa altura al nervio dentario inferior en el tercer cuadrante debido a la atrofia del maxilar inferior por ausencia de piezas dentales.*

Case description

The patient visited our clinic to get a second opinion.

General data

- 74-year-old woman; postmenopausal; body mass index
- (BMI): 20; resection of the medial meniscus of the left knee; non-Hodgkin lymphoma in 2013 treated with radiotherapy and chemotherapy; restless legs syndrome; insomnia; and phlebitis and thrombophlebitis of superficial vessels.

Dental history

- Various implants fitted in another dental clinic. They are not specified in the surgical notes, but we know they included pieces implanted in positions 34 and 36. That procedure was performed on 9 May 2016. The patient complained of severe pain from the first day, which was not alleviated with medication.
- The osseointegrated implant in position 36 was extracted seven days after surgery due to severe pain after sectioning the inferior alveolar nerve. The osseointegrated implant in 34 showed no signs of infection or mobility.
- The patient consulted several specialists and doctors without success.
- Mandibular canal compression was ruled out based on the dental CBCT scan provided by the patient and carried out in September 2016.
- Her primary care physician referred her to the Maxillofacial Surgery Service of the Hospital Universitario Rey Juan Carlos (Madrid) in January 2017. She was prescribed Hidroxil to stimulate nerve regeneration. She still reported pain in the reevaluation and was referred to the Pain Unit at the Hospital de Alcorcón (Madrid). At this institution on 27 April 2017, the patient underwent ablative radiofrequency on the left mental nerve, according to the report she provided. No change was recorded in the intensity of the pain.
- Her current medication consists of: gabapentin 300 mg, Lexatin [bromazepam] 1.5 mg, zolpidem 10 mg, paracetamol 1,000 mg, Rivotril [clonazepam] 0.5 mg, ropinirole 1 mg, Septrin Forte 800/160 mg and Nolotil [metamizole] 575 mg.

Primary complaint

When the patient visited our clinic, she presented neuropathic pain secondary to left alveolar nerve damage. The pain was chronic, burning and piercing. The patient could not sleep for more than three hours in a row, so it was unrefreshing. In addition, the pain affected her daily life and she experienced difficulty speaking, eating and drinking normally. The patient was very depressed due to the pain, the person accompanying her said she had not been the same since the pain began and looked very gaunt; in fact, she had lost weight (approximately four kilos).

Anamnesis

A 74-year-old patient was referred to our clinic from another centre, where she was fitted with

Caso dolor neuropático secundario a seccion del nervio dentario inferior tras la coloacion de un impante dental

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Introducción

Se presenta el caso de una mujer de 74 años con un cuadro complicado de dolor neuropático crónico, secundario a un implante dental. Tanto por la edad de la paciente, como por este tipo de dolor, el pronóstico es bastante reservado ya que la literatura y la experiencia clínica demuestran que tienden a cronificarse y son de difícil resolución con resultados que dejan bastante que desear (1,2,3). Es necesario la implementación de nuevas técnicas de afrontación para dar respuesta a esta clase de dolor que permitan dar respuesta efectiva a estos pacientes. Una de las alternativas terapéuticas podría ser la recuperación neurofuncional del paciente y la radiofrecuencia de tipo NO ablativo zonal, también llamada diatermia o tecar (4,5,6).

Palabras claves: *Dolor neuropático, complicación, implante, recuperación neurofuncional, radiofrecuencia NO ablativa.*

Descripción del caso

La paciente decide consultar para una segunda opinión.

Datos generales:

Mujer 74 años, postmenopáusica, IMC 20, resección del menisco interno de la rodilla izquierda, linfoma no Hodkgkin en 2013 recibió radioterapia y quimioterapia, síndrome de piernas inquietas, insomnio, flebitis y tromboflebitis de vasos superficiales.

Historia dental

- En otra clínica dental, se llevan a cabo varios implantes a la paciente (no especificados en la nota quirúrgica), entre otros en 34 y 36, el 09 Mayo de 2016.

- La paciente empieza a quejarse de dolor intenso desde el primer día, que no cede con la medicación.

- Se retiró el implante IOI en 36 el día 7 postcirugía, por dolor intenso tras sección del nervio dentario inferior.

- IOI Implante 34 sin signos de infección, sin movilidad.

- La paciente consulta varios especialistas y médicos sin resultado.

- Tras el CBCT TAC dental en Septiembre 2016 que aporta la paciente, se descarta patología compresiva en el canal del nervio dentario.

- Valorada por cirugía maxilo-facial, en el Hospital Universitario Rey Juan Carlos, en Enero del 2017. Se le pautó hidroxil para favorecer la regeneración del nervio. En la revaloración, contínua con dolor y es remitida a la Unidad del Dolor del Hospital de Alcorcón.

- En la Unidad de Dolor, se le realizó una radiofrecuencia ablativa del nervio mentoniano izquierdo, según el reporte que aporta la paciente el 27 de Abril del 2017. Sin cambios en la intensidad del dolor.

- Medicación actual: Gabapentina 300 mg, lexatin 1.5 mg, zolpidem 10 mg, paracetamol 1.000 mg, rivotril 0.5 mg, ropinirol 1 mg, septrim forte 800/160 mg, nolotil 575 mg.

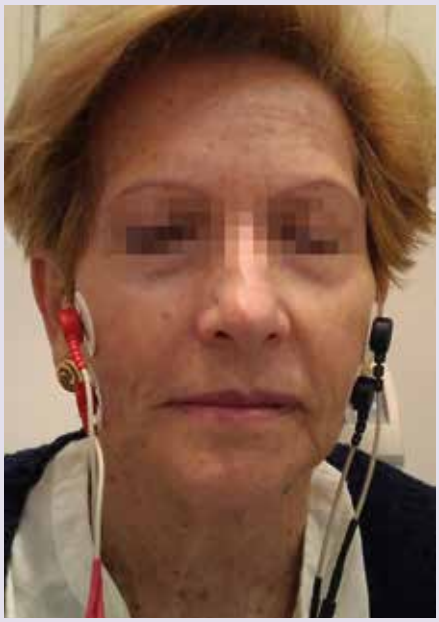


Fig. 2. At admission, note the asymmetry of the patient's oral angle and the general expression of tiredness and pain. The photo shows the positioning of the surface electrodes to record the activity of the TMJ muscles.

Figura 2. *Nótese la asimetría del ángulo oral y la expresión general de cansancio y dolor. En la foto se puede apreciar el posicionamiento de los electrodos de superficie para registrar la actividad de los músculos de la ATM.*

Fig. 3 Intraoral transmitter.
Image courtesy of Capenergy Medical.

Figura 3 *Emisor intraoral*
Imagen cedida por Capenergy Medica.

Motivo de consulta

Dolor neuropático secundario a trauma sobre el nervio dentario izquierdo. El dolor es de tipo permanente, quemante, lancinate, no le permite dormir más de tres horas seguidas, el sueño no es reparador. Altera sus actividades de vida diaria, tiene problemas para hablar, comer y beber con normalidad. Actualmente muy deprimida a causa del dolor, su acudiente refiere que no es la misma desde que tiene el dolor y la ve muy demacrada, ha perdido peso, aproximadamente cuatro kilos.

Anamnesis

Se recibe paciente mujer, de 74 años, remitida de otra clínica dental, en donde le realizaron con expansión, edensación, yuxtaósea, diversos implantes no especificados en la nota quirúrgica, de tipo eckermann hexagono evolution, haciendo referencia sólo a los implantes 34 y 36.

Al realizar el implante según refiere el informe del implantólogo que la operó, que la disponibilidad ósea era pobre y el hueso muy blando.

En el cuarto cuadrante inclinó el implante "más

various juxtaosseous implants, implementing expansion and bone densification, not specified in the surgical notes. The implants were Eckermann Hexagon Evolution. The patient only complained of pain in positions 34 and 36. According to the report by the implantologist who placed the implants, there was poor bone availability and it was very soft.

The implant in the fourth quadrant was angled more toward the distal to avoid the mental nerve, while the implant in the third quadrant was positioned vestibular to the alveolar nerve. Autologous grafts were used. The usual medication was prescribed.

Nevertheless, the patient immediately began to complain of very severe pain, that did not respond to medication or routine pain control measures. As the pain continued and implant 36 was unstable, the implantologist decided to extract it after seven days. However, the pain did not subside.

Fig. 4 Extraoral transmitter.
Image courtesy of Capenergy Medical.

Figura 4 *Emisor extraoral.*
Imagen cedida por Capenergy Medica.

(around 30.7 µV), typical of irritation, that concurred with the clinical picture of spontaneous pain referred by the patient.

Functional voluntary motor response was preserved, but with paroxysmal exacerbation due to pain caused by the irritation activity in the left mandibular muscles. This implies a limitation in the range of articular movement of the TMJ for the oral functions of opening, occlusion, left and right lateral deviation, mandibular protrusion and retrusion.

Her verbal function was affected by 40%, confirmed by the patient and the person accompanying her, due to dysarthria and fatigue after ten minutes of minimal vocal effort.

The extraoral transmitter (Fig. 4) was applied to the area innervated by the left alveolar nerve and to the periorbicular area.

The patient consulted her primary care physician who referred her to the Maxillofacial Surgery Service of the Hospital Universitario Rey Juan Carlos, where she was evaluated and treated with Hidroxil without success. She was then redirected to the Pain Unit of the Hospital de Alcorcón, where she was administered medication for neuropathic pain and scheduled for ablative radiofrequency. Unfortunately, despite the medication and radiofrequency sessions, the patient continued to experience pain. She then decided to seek the opinion of a second implantalogist, which is when she finally visited our clinic.

Evaluation

The patient scored 10 on the Visual Analogue Scale (VAS), with a detriment of 70% in the Quality of Life (QoL) scale. The patient had allodynia in the region of the left alveolar nerve, accompanied by paraesthesia in the periorbicular region of the lips, on the left side in particular.

An electromyograph was carried out on the surface of the masticatory muscles (masseter, temporalis and parietal) to assess the effect on the motor unit endplates and neuromuscular function. Measurements were taken with a NeuroTrac® MyoPlus Pro 2 EMG unit, with proprietary PC software.

A highly increased baseline was observed

Clinical approach

The clinic's implantology team assessed the patient and deemed her suitable for palliative neurofunctional nonablative radiofrequency treatment using the dental C-500 Intraoral Capenergy medical device.

The patient and the person accompanying her were explained that the treatment, as it is palliative, aims to control the pain and improve quality of life. She was informed that the result could not be guaranteed, as it is very complicated to treat neuropathic pain. After addressing all their doubts and questions, the patient signed the informed consent form and began the treatment.

Daily massage therapy stimulation with ice for five minutes, muscle and functional reinforcement exercises (oral, lingual and laryngeal) three times a day and respiratory and verbal execution exercises, which were taught to the patient and the person accompanying her to carry out at home, were prescribed. Three sessions of nonablative radiofrequency were indicated. Capacitive high-frequency sinusoidal emission was prescribed with absorption optimised coupling at 1 MHz and the temperature sensor set to 39 °C in the primary intraoral transmitter (Fig. 3). The extraoral transmitter (Fig. 4) was applied to the area innervated by the left alveolar nerve and to the periorbicular area. These emissions were performed for seven minutes on the external part and five minutes in the intraoral area.

Results

To facilitate follow-up and the presentation of patient data, the following time controls were defined:

T0: Baseline measurement before beginning the treatment.

T1: Corresponding to the results obtained after the first session. T2: Results obtained after the second session, performed after 24 hours.

T3: Results obtained in the third and final session, one week later.

T4: Corresponding to the one month follow-up measurement.

T5: Three month follow-up.

T6: Six month follow-up.

Pain

The neuropathic pain was controlled effectively after the first radiofrequency session. At T1, the patient reported a VAS score of 0 which was maintained for the rest of the sessions and throughout the following six months post-treatment (Graph 1).

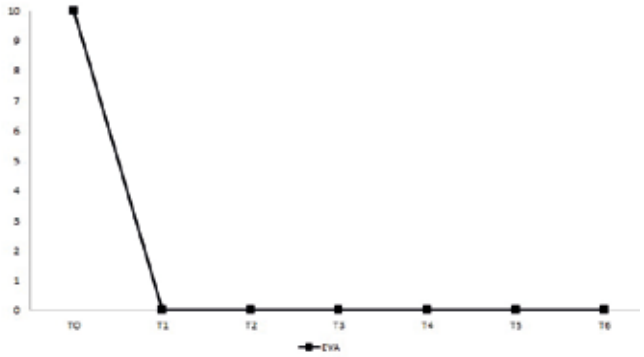
Quality of Life (QoL)

The patient's quality of life improved one hundred percent. The patient can currently sleep the whole night and sleep is refreshing. She can eat, drink and speak without inconvenience or pain (Graph 2).

Impact on vocal function

Vocal function was practically normal. Only the patient's partial edentulism prevented her pronouncing some syllables (Graph 3).

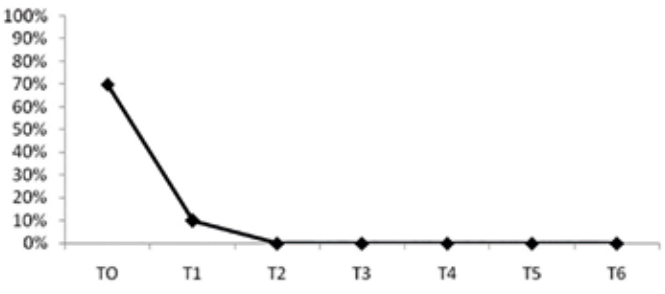
PAIN SCALE / ESCALA DE DOLOR



Graph 1. VAS for pain, scale from 0 (absence of pain) to 10 (the most severe pain).

Gráfica 1. *EVA del dolor escala del 0 (ausencia del dolor) al 10 (El dolor más intenso)*

IMPACT ON THE QUALITY OF LIFE / AFECTACIÓN CALIDAD DE VIDA



Graph 2. Evolution of the percent of impact on the patient's quality of life.

Gráfica 2. *Evolución de la porcentual de afectación en la calidad de vida de la paciente.*

distal" para evitar el nervio mentoniano y en el tercer cuadrante colocó el implante "por vestibular del nervio dentario". Realizó injertos autólogos. Le pautó "premedicación habitual".

Sin embargo la paciente inmediatamente empezó a referir un dolor muy intenso que no respondía a medicación ni a medidas rutinarias de control álgico. Al ver que el dolor continuaba, y que el implante 36 tenía "baja" estabilidad, el implantólogo anterior decidió retirarlo siete días después.

Sin embargo el dolor no remitió. Consultó a su médico de cabecera, quien le remitió al servicio de Cirugía Máxilo-Facial del Hospital Universitario Rey Juan Carlos, donde fue evaluada y tratada con hidroxil sin resultados, por lo cual fue redirigida a la Unidad del Dolor del Hospital de Alcorcón, en donde fue medicada para dolor neuropático y programada para radiofrecuencia ablativa. Desafortunadamente a pesar de la medicación y la sesión de radiofrecuencia la paciente continuó con dolor. Por decisión propia decidió tener una segunda opinión de implantología y consultó finalmente a la Clínica MEID.

Valoración

A la valoración se encuentra EVA de 10, detrimento en la escala Quality of Life QoL de un 70%, alodinia en el territorio inervado por el nervio dentario izquierdo acompañada de parestesias en la región periorbicular de labios, con especial énfasis en el lado izquierdo. Se realiza una electromiografía de superficie de la musculatura masticatoria (masetero, temporal y parietal), para valorar la afección sobre las placas de unidades motoras y la función neuromuscular. Se utilizó para la medición un equipo EMGs, marca Neurotrac® Myoplus Pro 2, con software propio de registro para PC. Se encontró una línea basal muy aumentada (alrededor de 30.7 µV), de patrón irritativo que concuerda con el cuadro de dolor espontáneo que refiere la paciente. Está preservada la respuesta motora voluntaria funcional, pero con exacerbación paroxística por dolor, por activación irritativa de los músculos mandibulares izquierdos, con limitación en la amplitud de movimiento articular de la ATM, para las funciones orales de apertura, oclusión, desviación lateral derecha e izquierda, protrusión y retrusión mandibular. Función verbal afectada en un 40%, seguún refiere la paciente y su acompañante por disartria y fatiga de mínimo esfuerzo vocal tras diez minutos.

Fig. 5 Note the change in the patient's facial gesture and wellbeing.

Figura 5 *Nótese el cambio gestual y el bienestar de la paciente.*

Conducta clínica

Es valorada por el implantólogo de la Clínica MEID, el doctor Jaime Molinos, que la considera una paciente apta para un tratamiento paliativo neurofuncional con radiofrecuencia de tipo NO ablativa, con el equipo médico dental C-500 Intraoral Capenergy. Se le explica a la paciente y a su acompañante, que el tratamiento al ser paliativo, busca controlar el dolor y mejorar la calidad de vida de la paciente. Que no se puede garantizar el resultado ya que el dolor neuropático es muy complicado de remitir. Tras despejar todas sus dudas y preguntas, firma el consentimiento informado e inicia el tratamiento. Se pauta masoterapia estimulativa diaria con hielo durante cinco minutos, ejercicios de refuerzo muscular funcional oral, lingual y laríngeo tres veces al día, junto con ejercicios respiratorios y de ejecución verbal, que se le enseñan a la paciente y a su acompañante para realizar en casa. Tres sesiones de radiofrecuencia de tipo NO ablativo. El tipo de emisión pautada es de alta frecuencia sinusoidal con acople maximizado de absorción a 1 MHz, con sensor térmico controlado a 39° C en el emisor intraoral primario (figura 3) de tipo capacitivo sobre la zona de inervación del nervio dentario izquierdo y zona periorbicular, con emisor extraoral (figura 4), durante siete minutos a nivel externo y cinco minutos a nivel intraoral.

Resultados

Para facilitar el seguimiento y presentación de datos de la paciente se determinan los siguientes temporales:

TO Medida basal antes de empezar el tratamiento.

T1 Corresponde al resultado obtenido tras la 1 sesión.

T2 Resultado obtenido tras la 2 sesión que se realizó a las 24 horas. T3 Obtenido en la 3 y última sesión una semana después

T4 Es la medición de control un mes después

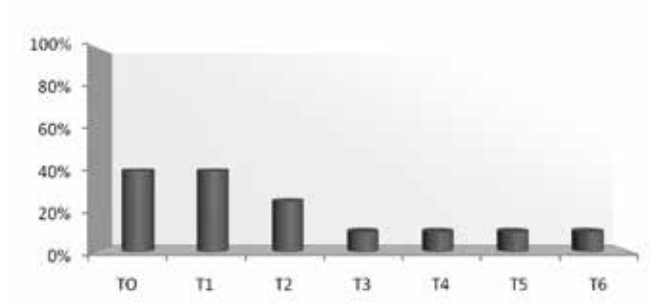
T5 Control a los tres meses

T6 Control a los seis meses.

Dolor

El control del dolor neuropático ha sido efectivo desde la primera sesión de radiofrecuencia. Obteniéndose un EVA de 0 desde el inicio, resultado que se ha mantenido durante el resto de las sesiones y durante los seis meses siguientes posttratamiento. Ver gráfica 1.

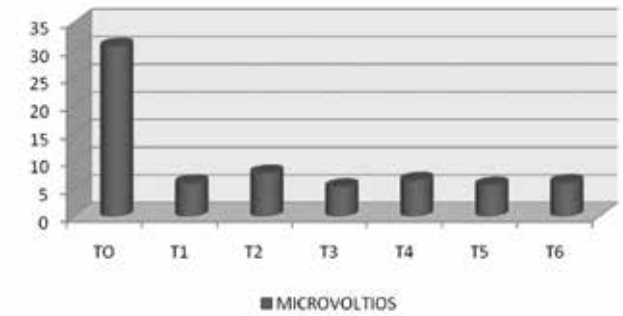
VERBAL DYSFUNCTION / DISFUCIÓN VERBAL



Graph 3. Follow-up of the patient's verbal disability. The remaining dysfunction was due to her edentulism.

Gráfica 3. *Seguimiento de la discacidad verbal de la paciente, el remanente de la disfución se debe a su edentulismo.*

BASELINE EMGS / REGISTRO BASAL EMGS



Graph 4. Evolution of the percent of impact on the patient's quality of life.

Gráfica 4. *Regularización de la respuesta a partir de la primera sesión y se mantiene en el tiempo.*

Surface electromyography

Surface electromyography results collected at the end of the treatment show a normalisation of the baseline (6.1 µV at the time of writing), elimination of the irritative and paroxysmal hyper-response to the oral functions of opening, occlusion, left and right lateral deviation, mandibular protrusion and retrusion (Graph 4).

Evaluation of the results

The patient scored the result as ten out of ten (Fig. 5), while our evaluation was 9.5. We discharged her from the service and recommended she continued with the massage therapy and exercises.

Only slight hypoaesthesia in a small area of the left lower lip remained. It did not cause discomfort or interfere in basic everyday activities. Her emotional state was good. The depression had subsided and the person accompanying her said that she had not looked this good in years.

Conclusions

Oral neurofunctional recovery through nonablative radiofrequency therapy seems to be a good alternative for treating patients with neuropathic pain secondary to dental implant placement. However, more research and case studies are needed before deciding upon suitable treatment protocols.

References

1. Politis C, Agbaje J, Van Hevele J, Nicolielo L, De Laat A, Lambrichts I, Jacobs R. Report of Neuropathic Pain After Dental Implant Placement: A Case Series. Int J Oral Maxillofac Implants. 2017 Mar/Apr; 32 (2): 439-444. doi: 10.11607/jomi.5241.

2. Zakrzewska JM. Multi-dimensionality of chronic pain of the oral cavity and face. J Headache Pain. 2013 Apr 25; 14: 37. doi: 10.1186/1129-2377-14-37.

3. Tait RC, Ferguson M, Herndon CM. Chronic Orofacial Pain: Burning Mouth Syndrome and Other Neuropathic Disorders. J Pain Manag Med. 2017 Mar; 3 (1). pii: 120. Epub 2017 Jan 30.

4. Qureshi A, Kellesarian SV, Pikos MA, Javed F, Romanos GE. Effectiveness of radio waves application in modern general dental procedures: An update. Quintessence Int. 2017; 48 (6): 497-502. doi: 10.3290/j.qi.a38139.

5. Handa K, Koike T, Hayashi K, Saito T. Application of high-frequency radio waves to direct pulp capping. J Endod. 2013 Sep;39(9):114750. doi: 10.1016/j.joen.2013.06.007.

6.Andrade Ortega, Cerón Fernández et al. Microwave diathermy for treating nonspecific chronic neck pain: a randomized controlled trial. Spine J. 2014 Aug 1; 14 (8): 1712-21. doi: 10.1016/j.spinee.2013.10.025. Epub 2013 Nov 1.

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Calidad de vida (QoL)

QoL ha mejorado un 100%. Ver figura 5. En la actualidad la paciente puede dormir toda la noche, el sueño es reparador, puede comer, beber y hablar sin molestias ni dolor. Ver gráfica 2.

Afectacón de la producción vocal

La función vocal es prácticamente normal, salvo la debida a su edentulismo parcial que le impide una pronunciación óptima de algunas sílabas. Ver gráfico 3.

Electromiografía de superficie

Los resultados electromiográficos de superficie al final del tratamiento muestran una normalización de la línea de base, actualmente en 6.1 µV para la línea de base, desaparición de la hiperrespuesta irritativa y paroxística a las funciones orales de apertura, oclusión, desviación lateral derecha e izquierda, protrusión y retrusión mandibular. Ver gráfica 4.

Valoración de los resultados

Valoración del resultado por parte de la paciente 10/10, valoración del implantólogo tratante 9,5/10. Se da de alta del servicio con recomendaciones para continuar con la masoterapia y los ejercicios. Solo queda una leve hipoestesia del labio en una pequeña zona del labio inferior izquierdo que no es molesta ni le interfiere con sus actividades básicas cotidianas. Su estado de ánimo es bueno. La depresión ha remitido y su acudiente refiere que hacía muchos años que no la veía tan bien.

Conclusiones

La recuperación oral neurofuncional y la radiofrecuencia de tipo no ablativo parecen ser una buena alternativa para el tratamiento de pacientes con dolor neuropático secundario a implantes dentales. Sin embargo se necesitarán más estudios y casuísticas para protocolizar adecuadamente los tratamientos.

La recuperación oral neurofuncional y la radiofrecuencia de tipo no ablativo parecen ser una buena alternativa para el tratamiento de pacientes con dolor neuropático secundario a implantes dentales.

Bibliografía

1. Report of Neuropathic Pain After Dental Implant Placement: A Case Series. Politis C, Agbaje J, Van Hevele J, Nicolielo L, De Laat A, Lambrichts I, Jacobs R. Int J Oral Maxillofac Implants. 2017 Mar/Apr;32(2):439-444. doi: 10.11607/jomi.5241.

2. J Headache Pain. 2013 Apr 25;14:37. doi: 10.1186/1129-2377-14-37. Multi-dimensionality of chronic pain of the oral cavity and face. Zakrzewska JM1.

3. Chronic Orofacial Pain: Burning Mouth Syndrome and Other NeuropathicDisorders. Tait RC, Ferguson M, Herndon CM. J Pain Manag Med. 2017 Mar;3(1). pii: 120. Epub 2017 Jan 30.

4. Effectiveness of radio waves application in modern general dental procedures: An update. Qureshi A, Kellesarian SV, Pikos MA, Javed F, Romanos GE. Quintessence Int. 2017;48(6):497-502. doi: 10.3290/j.qi.a38139.

5. J Endod. 2013 Sep;39(9):1147-50. doi: 10.1016/j.joen.2013.06.007. Application of high-frequency radio waves to direct pulp capping. Handa K1, Koike T, Hayashi K, Saito T.

6. Spine J. 2014 Aug 1;14(8):1712-21. doi: 10.1016/j.spinee.2013.10.025. Epub 2013 Nov 1. Microwave diathermy for treating nonspecific chronic neck pain: a randomized controlled trial. Andrade Ortega, Cerón Fernández et al.

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PRF Challenges

Platelet rich fibrin can play an important role in oral and maxillofacial Surgery, implant dentistry, periodontal regeneration and post-extraction site preservation.
The fibrin in PRF is a reservoir of platelets that will slowly release growth factors and cytokines which are the key factors for regeneration of the bone and maturation of the soft tissue to improve tissue repair during wound healing. PRF is a natural fibrin-based biomaterial prepared without anticoagulants or additives that allow us obtain autologous fibrin membranes and plugs with a high concentration of platelets and white cells, releasing growth factors at the surgical site to accelerate the healing process.

The manufacturing of PRF brings new challenges to the dentist: Infection control-staff training-education and research of the products used.

Platelet rich fibrin can play an important role in oral and maxillofacial Surgery, implant dentistry, periodontal regeneration and post-extraction site preservation.

Handling patient's blood and manufacturing blood products transforms the dental office into a blood bank facility where stricter cross contamination control protocols should be followed. All instruments and supplies used for the manufacturing of PRF should be sealed sterile and Two fields protocol will eliminate the risk of contamination of the PRF.

Manufacturing of PRF is a simply 4 steps protocol:

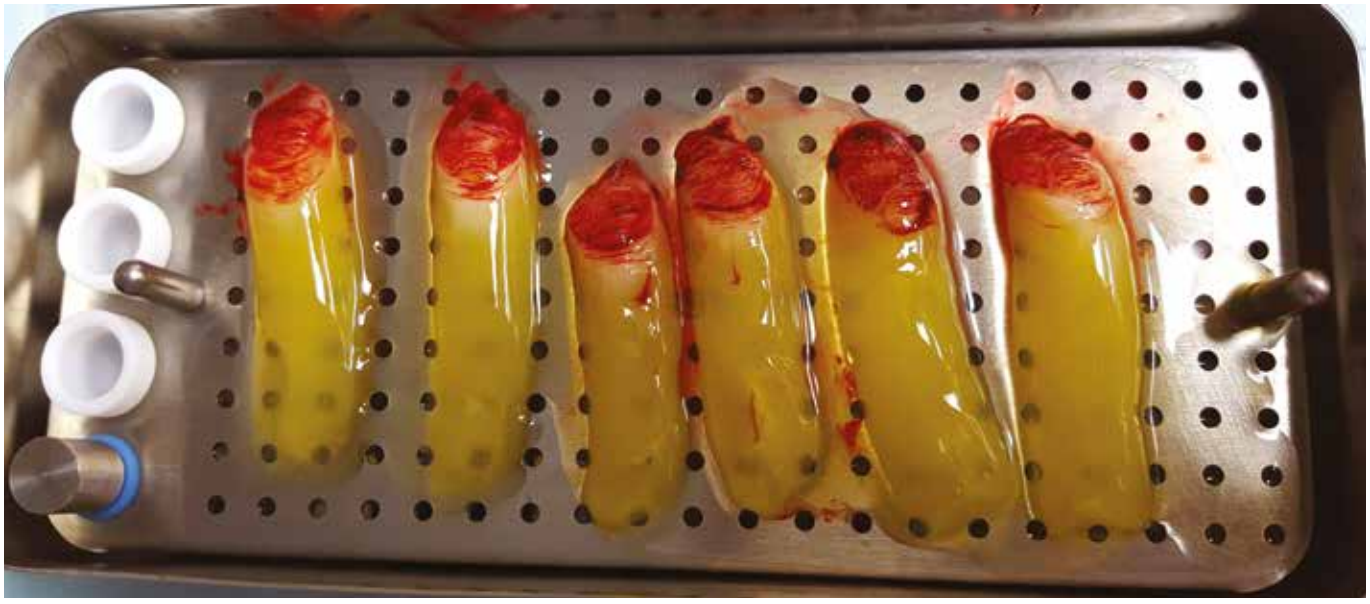
1-Venipuncture

2-Centrifugation

3-PRF Handling

4-Mix with bone

How is PRF clot formed?
After the blood is collected into the glass tubes and during centrifugation, **the contact of Blood coagulation factors with**



the natural hydrophilic glass surfaces activates the clotting cascade leading to the conversion of fibrinogen to fibrin forming the PRF Clot.

If plastic tubes were going to be used for PRF clot, PRF membranes and PRF plugs, such tubes will have to have additives like silica and other chemical products to **simulate the clotting characteristics of the natural glass.**
The use of plastic tubes with silica coating to simulate glass brings the challenge of risks to the patient's health, because the literature and research evidence shows that silica increases the risk of cancer, silicosis, DNA damage, heart failure and death.
If serious publications by governmental and cancer institutions demonstrate such risks to humans, is obvious that the same risks will have the patients when tubes with micro-silica coating are used for PRF manufacturing. **Silica dust exposure is similar to asbestos exposure and may often result in legal claims due to improper practices**.[5]

When plastic blood collection tubes without any additives are used for blood collection and centrifugation, we obtain liquid PRF that is used to apply to the sticky bone and transform it into PRF steaky bone. This improves the handling characteristics of the bone graft material in solid form preventing scatter particles of bone than could cause increased inflammatory response and swelling after surgery.
We, as clinicians involved in regenerative procedures and the manufacturing of PRF, are obligated to use only materials and supplies that guarantee patients' safety using only sterile packed disposables in surgery and avoiding devices that could increase the risk of cancer in patients.

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Bibliography:
1- National Cancer Institute: Cristaline-Silica-and-cancer: https://www.cancer.gov/about-cancer/causes-prevention/risk/substances/crystalline-silica
2- Silica and DNA Damage: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1566987/pdf/envhper00409-0150.pdf
3- M. Dohan Ehrenfest, L. Rasmusson, T. Albrektsson-Classification of platelet concentrates: From pure platelet-rich plasma (P-PRP) to leucocyte- and platelet-rich fibrin (L-PRF) Trends Biotechnol, 27 (2009), pp. 158-167
4- Centers for Disease Control and Prevention. December 8, 2006. Viral Hepatitis.
Sjogren, MH. Hepatitis A. In: M Feldman, LS Friedman, LJ Brandt (eds), Gastrointestinal and Liver Disease, 8e. Philadelphia, Elsevier, 2006. 1639.
5- https://www.legalmatch.com/law-library/article/silica-dust-exposure-lawsuits.html

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New Therapeutic Management of TMDs, Through the Immediate Re-educational Device: "Lingual Ring Ri.P.A.Ra."

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AIM OF THE WORK
The aim is to present the authors' protocol-based experience on an alternative therapeutic use of the bite in patients with TMDs (Temporo Mandibular Disorders), which also included the active repositioning of the tongue. The protocol requires a more active cooperation of the patient and the use of the bite also as a re-educational tool. To achieve this the Ri.P.A.Ra. Lingual Ring was used; this occlusal device is not just a simple bite, but a device for positional and functional rehabilitation, which has been used by the authors for several years in the gnathological field.

MATERIALS AND METHODS
A consecutive series of 600 patients were observed, from February 2014 to February 2016. All subjects were evaluated using a codified clinical, anamnestic, instrumental protocol for the analysis of the presence of TMJ dysfunctions, developed according to the Research Diagnostic Criteria for Temporo Mandibular Disorders (RDC/TMD). From the initial 600 patients, 160 subjects were selected based on the inclusion and exclusion criteria, all with disc displacement with reduction that was treated according to the new protocol using the Ri.P.A.Ra. Lingual Ring.

RESULTS AND CONCLUSIONS
The present study showed interesting results in the treatment of patients with TMD. In fact, 99 patients out of 160 (62%) experienced remission of all symptoms in 3 months.
This confirms that the protocol is certainly valid to detect articular imbalances (clicking, TMJ pain, myalgia) arising from possible occlusal alterations, but especially by neuromuscular problems and tensions, also confirmed by the instrumental tests performed: MRI of TMJ with and without the Lingual Ring in the mouth and electromyography.

The diagnostic and therapeutic setting for RDC/1992 (1) and DC/2014 (2) of Temporo Mandibular Disorders (TMD) through axis 1 and axis 2 as well as its etiological framework have changed a lot in recent years. Most of all, the causal role attributed to dental occlusion (3, 4) has changed. While in the past it was highly focused on an etiological action (5, 6, 7, 8); now, instead, neuromuscular factors, linked to psychosocial (9) issues and to stress (10), as already cited in the past (11, 12, 13), combined to specific facial morphologies (14), have gained broad consensus. As such, bite therapy also needs to adapt to international literature which provides new therapeutic approaches: "Cognitive Awareness, Counseling, Self-Care, Patient Education, Lifestyle Modification, Behavioral Therapy" (15-23, 32), and needs to adapt to the "Bio-Psycho-Social" model through "conservative therapies based on evidence and on low invasiveness" (2, 24, 32). Therefore, traditional concepts of bite therapy must be reviewed. The bite should no longer be used passively only at night and a few hours during the day, with check-ups limited to the evaluation of occlusal contacts, but being an important therapeutic device, recognized and validated by the scientific community (25, 27, 32, 33), it must also turn into a re-educational device, in consideration of the role attributed to neuromuscular and psychosocial factors, together with the occlusal factor. This can be achieved through active involvement and collaboration of the patient with behavioral strategies and physical exercises performed by the patient with the bite. The review of international literature, in fact, now agrees in recognizing as valid, and sometimes on the same level, the following therapies:

A. Therapy with bite;
B. Therapy with counseling and self-care;
C. Therapy with physiotherapeutic exercises done by the patient at home and with the therapist (15-23) (fig. 1).

In the following work we present a new therapeutic protocol with a different use of the bite which includes more collaboration from the patient. The bite becomes a true re-educational tool with which the patient also implements the above mentioned therapies, B and C, and the clinician doesn't just check the occlusal contacts but uses the bite as a mean for neuromuscular deprogramming and for functional and cognitive-behavioral re-education (fig. 1). Such protocol, in order to be applied, requires the use of a new immediate device: the bite Ri.P.A.Ra. Lingual Ring (fig.2,3,4,5) already in use for some years in different public and private structures, among which the Department of

Clinical Gnathology at the Polyclinic Umberto I, University of Rome La Sapienza, (25, 26, 27), the Department of Orthodontics and the Department of Surgical, Oncological and Dental Disciplines at the Polyclinic "Paolo Giaccone" in Palermo, and in several other Public Healthcare Centers (ASL).

MATERIALS AND METHODS

Sample and Study Protocol

A consecutive series of 600 patients were observed, from February 2014 to February 2016 at the different mentioned structures. All subjects were evaluated using basic clinical, anamnestic, instrumental protocols to analyze dysfunctions and/or osteoarticular structural anomalies, according to the Diagnostic Criteria for Temporo Mandibular Disorders (DC/TMD).

Several pathologies were observed, and the patients were selected based on the inclusion and exclusion criteria as indicated below.

Inclusion criteria:

- disc displacement;
- joint pain =/> 20 scale NVS (Numerical Verbal Scale);
- muscular pain "myalgia" =/> 20 scale NVS;
- tension headache and/or migraine =/> 20 scale NVS;
- cervical pain and/or column pain arising from tension =/> 20 scale NVS;
- parafunctions associated to muscular and/or joint pain;
- consent to take part in the study.

Exclusion criteria:

- dislocations not linked to the joint disc;
- post-trauma outcomes, malformations, TMJ or maxillofacial surgery;
- patients already in therapy for such pathology;
- systemic joint pathologies (rheumatoid arthritis, arthrosis, psoric arthritis, Ehlers-Danlos Syndrome EDS);
- neurological and/or psychic headache and/or pathologies;
- partial edentulous with 8 or more missing teeth;
- positivity to axes 2.

From the initial 600 visited patients, 440 were not considered as they did not fall within the inclusion criteria. Of these 64 had joint lock; 26 referred to trauma or fracture outcomes; 120 had a pain threshold inferior to 20 VNS; 26 were missing more than 8 teeth and had no adequate prosthesis; 24 denied their consent in taking part in the study. The remaining 160 have been included in the new protocol. The sample was therefore represented by a consecutive series of 160 subjects of which 128 were female and 32 male, aged between 21 and 63, with average of 42 years. All patients (100%) were affected by joint disc displacement with reduction; 109 patients (68%) had TMJ pain; 115 patients (72%) had muscular pain; 123 patients (77%) had headache; 82 (51%) cervical pain; 130 (81%) had parafunctions with clear signs of abrasion, problems in teeth clenching or bruxism noises.

All patients were adequately informed on how to use the bite Ri.P.A.Ra. Lingual Ring and on the new protocol to follow (fig. 1):

A. Therapy with bite Ri.P.A.Ra. Lingual Ring to wear every night;

B. Therapy with counseling and self-care;

C. Therapy with physiotherapeutic exercises done by the patient at home and guided by the therapist in the different structures using the bite Ri.P.A.Ra. Lingual Ring (15-23) (fig. 1).

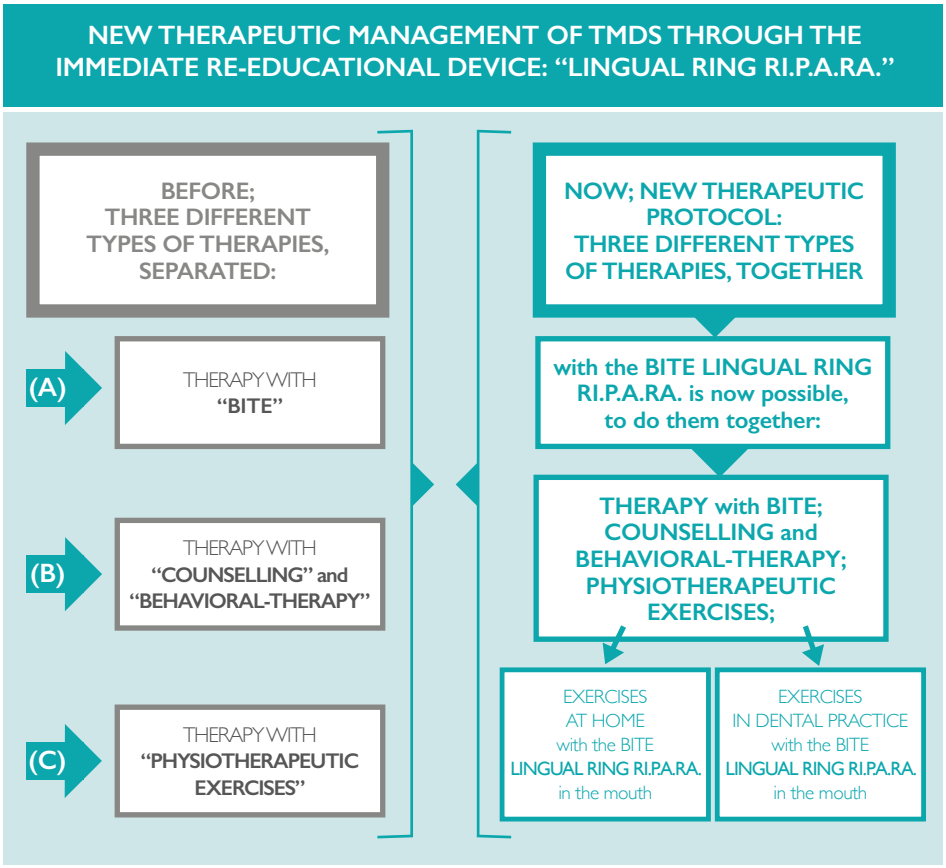

Fig. 1 New therapeutic protocol with Ri.P.A.Ra. Lingual Ring.

Detailed description of the shape and function of the Ri.P.A.Ra. Lingual Ring

Before presenting the clinical protocol in all its details, we hereby describe the Ri.P.A.Ra. Lingual Ring specific features – the Rampello* Active Positional Re-educational Lingual Ring (fig. 2).

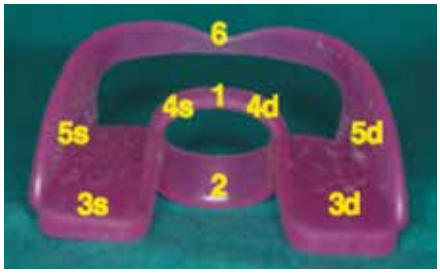

Fig. 2 Parts that make up the bite Ri.P.A.Ra. Lingual Ring.

Shape

The Ri.P.A.Ra* means= Rampello* Active Positional Re-educational Lingual Ring, as per registered patent**, is made up of several parts that we have conveniently divided into central C and peripheral P (fig. 2).

The central part C is made up of the Lingual Ring and two horizontal plates and it is the most "active" part. The peripheral part P is made up of balancing systems, anchorage, assessment and stabilization and it is the "passive" part. In part C, the Lingual Ring is made up of two arches: inferior arch "1" and superior arch "2", which are literally attached, forming a whole with the two symmetric horizontal plates which are to be positioned between teeth: plate "3d" on the right and plate "3s" on the left (fig. 2 and 3). The whole makes up the most important, universal and functional "active" unit. In part P, corresponding to the peripheral part with reinforcement systems, anchorage, assessment and stabilization, we have: two small symmetric palatal, vertical, reinforcement rims "4d" and "4s", two symmetric balancing, vertical and lateral cheek shields "5d" on the right and "5s" on the left, a linking front vestibular band "6" connecting the two lateral cheek shields. After countless technical compression, torsion, traction and cut tests, studies on similar devices already on the market and after many years of clinical trials on prototypes, a platinum medical silicone was chosen to produce the device. The chosen silicone is non-toxic, hypoallergenic, biocompatible and compliant with the legislation (UNI EN ISO 109931:2010) and EU 93-42 CE directives, hardness 55-60 Shore (class I medical device).

**Ri: Re-educator: for cognitive-behavioral therapy; P: Positional: as it modifies the posture of condyles, mandible, tongue and masticatory muscles; A: Active: as it is not a passive device among teeth but a device with which the patient makes specific exercises; Ra: Rampello: the creator's surname.*
***Industrial patent N. RM2014A000673 extended to Europe and the USA. Registered by the Ministry of Health as medical device with identification number 1175800, repertory "N", class code "A1", with commercial name "Ri.P.A.Ra. Lingual Ring", CND Q010499, regularly on the market since 2014 with "CE" mark.*

Function

Ri.P.A.Ra. Lingual Ring has very specific features as a result of many years of research and clinical validations (25, 26, 27). As described, in central part C there is a ring made up of two arches and two horizontal plates. The ring with the inferior arch "1" has two main functions: it brings the mandible and condyles in advanced position; it raises the tongue in advanced position with the tip against the "spot". While the superior arch "2" has the function of keeping the device

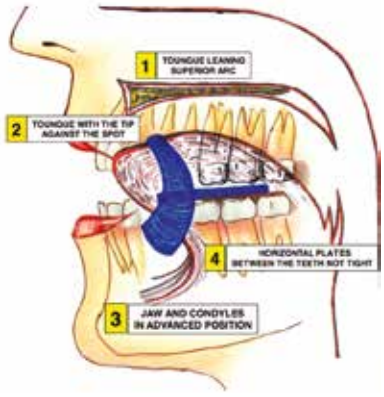

Fig. 3 Scheme of the correct positioning of the tongue and the bite Ri.P.A.Ra. Lingual Ring (sagittal view).

Ri.P.A.Ra. Lingual Ring has very specific features as a result of many years of research and clinical validations.

lifted up through the tongue. The two horizontal plates have other important functions: they modify the vertical dimension; they release the occlusal relation and they change the occlusal-articular relationship.
Part "P", consisting of the lateral cheek shields and the front band, balances the buccinator muscles' forces and helps to stabilize and retain the whole device. The new posture of tongue and mandible, as well as modifying the vertical dimension, stimulates the stretching of all oral cavity muscles, both vertical (masseter, internal and temporal pterygoids) and horizontal (external pterygoids and buccinators), as well as those of the tongue. As a consequence, it changes the lever and force of the arms and at the same time it keeps the tongue high and in advanced position with the tip against the "spot" for further neurological stimulation (28-31). Therefore, the new posture of mandible and tongue modifies the hyoid bone position as well as that of the rachis paravertebral muscles. As such, the Ri.P.A.Ra. Lingual Ring encompasses and acts on all these components aiming at the positional re-education of the tongue, mandible and the entire oral cavity (Fig. 3). This differentiates it from all the other universal devices which instead

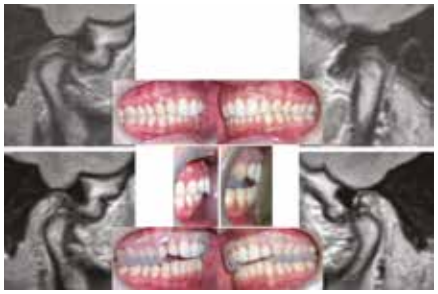

Fig. 4 Above: MRI without the Ri.P.A.Ra. bite in the mouth with disc displacement. Below: MRI with the Ri.P.A.Ra. bite in the mouth without disc displacement.

Fig. 5 Correct positioning of bite Farrar and bite Ri.P.A.Ra.. To notice the different positioning of the tongue.

only tend to keep dental arches distant without any repositioning or re-educational function as only thought to work as contrast "cushions" to the load of the vertical muscles forces (masseter, internal and temporal pterygoids). The occlusal-articular reprogramming, with tongue re-education obtained through new posture and exercises has beneficial effects on all parts of the oral cavity and on mandibular, cervical and cranium disorders or TMDs.

Therapeutic protocol

The therapeutic protocol adopted by us has combined three big therapeutic concepts all recognized by international literature (15-23). They have not been separated or carried out at different times but they have all been integrated together and carried out simultaneously, that is (fig. 1):
A. Therapy with bite Ri.P.A.Ra. Lingual Ring;
B. Therapy with counseling and self-care together with the use of the bite Ri.P.A.Ra. Lingual Ring;
C. Therapy with physiotherapeutic exercises done by the patient, wearing the bite Ri.P.A.Ra. Lingual Ring, both at home and under the direction of the clinician.
Therefore, the new protocol will include A, B and C simultaneously, wearing the bite

Ri.P.A.Ra. Lingual Ring in the mouth (Fig. 1). All patients were adequately informed on the type of protocol, its characteristics and on the use of the bite Ri.P.A.Ra. Lingual Ring, on the exercises to carry out with the bite Lingual Ring and on cognitive behavioral therapy with the complete program to follow according to the following scheme:

- Detailed information, explanation and instructions on the actual pathology so as to give the patient the conscious perception of the problem and the best possible compliance;
- Detailed information, explanation and instructions on self-care and behavioral precautions;
- Detailed information, explanation and instructions on the Ri.P.A.Ra. Lingual Ring device with indications on its use: to wear every night (6-8 hours) and for at least 2 hours during the day, to carry out the exercises with instructions to position the tongue high at the "spot"; cognitive information not to clench the teeth on the horizontal plates (3d and 3s);
- Detailed information and explanation on the exercises to carry out wearing the Ri.P.A.Ra. Lingual Ring device at home, at least three times a day on the first 21 days of therapy: in the morning on waking up; on returning home from work; at night before going to bed. Afterwards, at least once a day for the next 10 days and again with the instructions to position the tongue high at the "spot" and cognitive information not to clench the teeth on the horizontal plates (3d and 3s);
- During clinical check-ups, all patients were asked: to describe the evolution of symptoms, the presence or absence of disturbances or annoyances and the timing of use. At every check-up the patients were asked to carry out the prescribed physiotherapy exercises wearing the Ri.P.A.Ra. Lingual Ring while the clinician observed and eventually corrected movements coordination, underlining the importance of the tongue posture against the "spot" and, most of all, of the cognitive perception not to clench the teeth on the horizontal plates;
- The only occlusal therapeutic device used by all patients was the Ri.P.A.Ra. Lingual Ring;
- The established maximum duration of the entire cycle of treatment was 3 months.

All patients were adequately informed and a previous written consent to use the Ri.P.A.Ra. bite was obtained by each one of them.

A timing of regular check-ups was planned with check-ups every 15-20 days. All patients were evaluated according to a comparison of parameters measured at the beginning (T0): pain, analysis of mandibular movements with fluidity, symmetry and asymptomatic qualitative and quantitative comparisons. At the end of treatment a segmentation analysis was carried out with the following evaluation:

- W: got worse: at least one symptom or sign of having got worse and no sign of improvement;
- S: stationary: no symptom of improvement, no sign of having got worse;
- I: improved: at least one symptom of improvement and no sign of having got worse;
- MI: much improved: complete absence of signs or symptoms.

A summary of the analyzed symptoms, expressed both in absolute values as number of patients, and in percentage values, for a final evaluation of the effectiveness of the new integrated protocol, through the use of the Ri.P.A.Ra. Lingual Ring, are summarized in tables 1 and 2.

Expected functional and symptomatic answers

The expected functional and symptomatic answers from the application of the new protocol using the bite Ri.P.A.Ra. Lingual Ring were:

- Reduction of joint and muscular pain;
- Headache reduction;
- Reduction and disappearance of TMJ noises with subjective and objective qualitative and quantitative movement improvement;
- No significant changes in the dental contact observed by the patient or the clinician.

RESULTS

Analyzing the results has allowed us to come to the following considerations. The new protocol application time using the bite Ri.P.A.Ra. Lingual Ring was about 3 months for all patients. Minimum time for significant improvement in the symptoms was about 1 month in 52 patients. Maximum time was 3 months in 20 patients. Average time was 2 months in 88 patients.

	CLICKING	TMJ PAIN	MUSCULAR PAIN	HEADACHE	CERVICAL PAIN	PARAFUNCT.
Beginning	160	109	115	123	82	130
Got worse	0	0	0	0	0	0
Stationary	6	0	0	35	28	29
Improved	51	36	32	29	26	101
Much improved	103	73	83	59	28	0
Patients that have much improved all the symptoms simultaneously = 99						

Tab. 1 - Absolute values as number of patients.

	CLICKING	TMJ PAIN	MUSCULAR PAIN	HEADACHE	CERVICAL PAIN	PARAFUNCT.
Beginning	160	109	115	123	82	130
Got worse	0%	0%	0%	0%	0%	0%
Stationary	4%	0%	0%	28%	34%	22%
Improved	32%	33%	28%	24%	32%	78%
Much improved	64%	67%	72%	48%	34%	0%
Patients that have much improved all the symptoms simultaneously = 99 = 62%						

Tab. 2 - Percentage values compared to the number of patients.

Minimum bite Ri.P.A.Ra. Lingual Ring time of use was 4 hours in 16 patients. Maximum time of use was 13 hours in 95 patients between day and night including the time for physiotherapy exercises done at home. The average daily use was 8.5 hours. The initial joint pain found in 109 patients, 68% of the sample, disappeared in 73 patients (67% of the 109 patients and 46% of the total 160) and improved in 36 patients (33% of the 109 with TMJ pain and 22.5% of the total 160). As such, TMJ pain disappeared in 2/3 of the patients and diminished in intensity in about 1/3 of the patients, while no one reported of getting worse.

Myalgia, initially found in 115 patients, 72% of the sample, disappeared in 83 patients after treatment (72% of the initial 115 and 52% of the total sample) and diminished in intensity in 32 patients (28% of patients with myalgia and 20% of the total 160) confirming, here too, that over 2/3 of patients stopped having muscular pain and less than 1/3 had a pain reduction while no one had gotten worse.

Headache, reported by 123 patients, corresponding to 77% of the sample, disappeared after treatment in 59 patients (48% of the 123 and 37% of the total sample) and among the 64 still affected by headache, for 29 (24%) the headache had improved or was milder compared to beginning of treatment, while 27 patients remained stationary with mild and 8 with strong headache (22% and 6% = 28%) confirming that if the symptoms are linked to the dysfunction they tend to improve.

Cervical pain, initially present in 82 patients, corresponding to 51% of the sample, disappeared in 28 patients after treatment (34% of the 82) and all of them referred to tensions or had verticalizations of the cervical spine before treatment. Among the 54 stationary patients, 26 (32% of the 82) reported of a slight improvement and they mostly had pathologies of the cervical district such as: vertebral crushing, arthrosis or cervical distortion due to an abrupt head movement. While, the remaining 28 (34% of the 82) had an initial diagnosis of hyperlordosis. This figure leads us to believe that our protocol, with the Ri.P.A.Ra. Lingual Ring, can be of greater advantage to subjects with rectilinization of the cervical spine tract rather than subjects with hyperlordosis. Therefore, we believe that an in-depth analysis of this parameter would be fundamental with further clinical, instrumental and interdisciplinary investigations. Among the 130 patients with parafunctions, 81% of the total sample, 101 (78% of the 130) reported of perceiving a different feeling while clenching the teeth and to waking up in the morning with less muscular tension, while for 29 patients (22%) there was no change and all remained stationary. TMJ noises, affecting the whole sample (160 patients, 100%), disappeared in 103 patients (64%), improved in 51 subjects (32%) and remained stationary in 6 patients (4%). No one reported of getting worse. These figures lead us to believe that our protocol has an excellent feedback in the medium and long term for symptoms such as TMJ pain, myalgia and muscular hyperactivity, while for more mechanical problems, whether or not linked to muscular hyperactivity and/or occlusal alterations, even if we had an excellent feedback, we believe in the need for a longer treatment time of more than 3 months, compared to the treatment time used in this first study, to further strengthen the anatomical-functional rebalancing. To finalize the results' evaluation we have summarized the final analysis, based both on the symptoms as well as on the answers given by the patients regarding how they felt before starting treatment (Table 1 and 2).

DISCUSSION AND CONCLUSIONS

Traditional bites used in gnathology today are mainly passive, they are not used by clinicians to carry out functional exercises and are not structured to do so. Patients only need to wear them and clinicians, during check-ups, only need to check if there are changes in occlusal contacts. Even the many immediate bites on the market in the last few years are mainly to protect teeth from the wearing out of bruxism and/or clenching of the teeth and are not re-educational or functional. The novel device Ri.P.A.Ra. Lingual Ring differs very much from classic devices and from the simple immediate devices as it is thought as re-educational bite.

As shown in the protocol description, the patient, as well as wearing the Lingual Ring, also becomes actively involved especially as regards tongue posture, physiotherapy exercises wearing the Ri.P.A.Ra. and the behavioral attitude not to clench the teeth on the bite's horizontal plates. This combines simultaneously the three therapeutic treatments A, B and C, already reviewed

by the literature (fig. 1) (25, 27, 32, 33). Therefore, in the last few years our treatment strategies have evolved in this direction and the mentioned protocol has been adopted allowing us to achieve the mentioned results and to draw the following considerations and conclusions.

• Not one patient out of the 160 in the sample has worsened his/her situation. This data is highly relevant given the low cost of clinical management, being a ready to use device, the limited economic and biological cost, but above all its low invasiveness, its reversibility and the conservative therapy based on evidence.

• Of the patients that remained stationary only: 6 (4%) out of 160 patients had clicking from the beginning; no one (0%) with TMJ pain; no one (0%) with muscular pain; 35 (28%) with headache, 28 (34%) with cervical pain; 29 (22%) with parafunctions. Therefore, very few subjects remained stationary and most likely they all had more complex or structural alterations, especially as regards cervical pain that, as already mentioned, seems to be linked more to pathologies of the cervical district such as post-traumatic tensions or hyperlordosis. In fact, we have noticed that patients with rectilinization have benefitted the most from our protocol rather than those with hyperlordosis; underlining as such the need for an in-depth investigation on this regard.

• Patients that have improved: 51 (32%) patients with clicking; 36 (33%) with TMJ pain; 32 (28%) with muscular pain; 29 (24%) with headache; 26 (32%) subjects with cervical pain; 101 (78%) patients with clenching of teeth and/or bruxism from the beginning.

• Patients that have much improved with total disappearance of the symptom: 103 (64%) patients out of the 160 with clicking from the beginning; 73 (67%) with TMJ pain; 83 (72%) with muscular pain; 59 (48%) with headache; 28 (34%) with cervical pain.

• Lastly, by making a thorough evaluation of symptoms remission, we have seen that 99 patients, corresponding to 62% of the sample, reported a simultaneous disappearance of all symptoms. This figure, together with the figure of the patients that have improved and those that have much improved, confirms that the novel universal device Lingual Ring is certainly valid, together with the new protocol, to

The novel device Ri.P.A.Ra. Lingual Ring differs very much from classic devices and from the simple immediate devices as it is thought as re-educational bite.

detect articular imbalances (clicking, TMJ pain, myalgia) arising from possible occlusal alterations but above all from neuromuscular problems and tensions. This conclusion is above all confirmed by the instrumental tests performed: MRI of TMJ with and without the Lingual Ring in the mouth (fig. 4 and 5); "T0" electromyography without the device and "T3" after 3 months of Lingual Ring utilization; axiography with and without the device in the mouth documenting the occlusal and condylar tridimensional repositioning.

Overall, our study conclusions can only be positive, if we also consider the 3 months of protocol, which is a short time. The novel universal bite Lingual Ring, immediately available for the patient and clinician, combined to self-care and exercises – counseling, behavioral therapy and exercises at home and with the clinician. – (8-12), and to behavioral gnathology (fig. 1), has demonstrated to be an effective device for the immediate treatment of TMDs.

Advantages and disadvantages

On the sidelines of what said it is important to briefly summarize advantages and possible disadvantages of this new therapeutic approach.

Advantages

• Possibility to combine different therapeutic approaches in a more complete treatment plan, that is: bite therapy, information and educational therapy, therapy with physical exercises and myofunctional re-education, behavioral therapy.

• The immediate use of the bite Lingual Ring, ready to use, both for the patient and the operator.

• Low economic and clinical management; low biologic invasiveness, attaining to valid conservative therapies.

• Reduction of waiting times (often long), both in private practices but especially in public structures.

• Easy management for the patient and clinician.

• The use of the tongue in functional re-educational therapy.

• Good tolerability and versatility.

• Possibility of having differential responses from the different types of TMDs, to be able to eventually differently adjust the continuation of therapeutic treatment. This last point reinforces the logic behind "conservative therapy based on evidence and low invasiveness", requested by the scientific community, to obtain the highest benefit with the minimum effort and only subsequently plan more complex therapies. On this regard we underline the fact that all patients will continue to be monitored and those that remained stationary or just improved will be examined again and included in the program using specific therapies or traditional bites. As well as the mentioned advantages, the clinician can also prescribe the bite Lingual Ring to patients that have finalized rehabilitative or prosthetic dental treatments for deconditioning and/or occlusal protection.

Disadvantages

The disadvantage of this new device and its protocol is mostly linked to a higher need of collaboration from the patient that needs to learn how to manage the bite both strategically and with timing. Another possible disadvantage could be the management of tongue posture, which is important for the correct positioning of the device in the mouth. Obviously, advantages and disadvantages are also linked to a clinician's training and ability. The present study, even if carried out on a population of 160 subjects, needs further in-depth analysis and a longer monitoring for clinical risks.

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BIBLIOGRAPHY

1. Dworkin SF, Leresche L. The researchdiagnosticcriteria for TMD (RDC/TMD), developed by The Journal of Craniomandibular Disorders, Facial & OralPain; 1992.
2. Ohrbach R, Gonzalez Y, List T, Michelotti A, Schiffman E. Diagnostic Criteria for Temporo Mandibular Disorders (DC/TMD). Clinical Examination Protocol. Version: January 6, 2014.
3. Turp JC, Schindler H. Review Article: The dental occlusion as a suspected cause for TMDs: epidemiological and etiological considerations. J Oral Rehabil 2012 Jul;39(7):502-12. doi: Epub Apr 9, 2012.
4. Badel T, Marotti M, Pavicin IS, Basic-Kes V. Temporomandibular disorders and occlusion. Acta Clin Croat 2012 Sep;51(3):419-24.
5. Shore NA. Occlusal equilibration and TMJ disfunction. Philadelphia: JB Lippincott Co; 1959.
6. Gerber A. Temporomandibular joint and dental occlusion. Dtsch Zahnarzt Z 1971; 26:119-41.
7. Ramfjord SP, Ash MM. Occlusion. Philadelphia: WB Saunders Co; 1971. p. 275–312.
8. Farrar WB, Mc Carty WL Jr. Inferior joint space arthrography and characteristics of condylar paths in internal derangements of the TMJ. J Prosthet Dent 1979 May;41(5):548-55.
9. Salameh E, Alshaarani F, Hamed HA, Nassar JA. Investigation of the relationship between psychosocial stress and temporomandibular disorder in adults by measuring salivary cortisol concentration: A case-control study. J Indian Prosthodont Soc 2015 Apr-Jun;15(2):148-52.
10. Nevalainen N, Lähdesmäki R, Mäki P, Ek E, Taanila A, Pesonen P, Sipilä K. Association of stress and depression with chronic facial pain: a case-control study based on the Northern Finland 1966 Birth Cohort. Cranio 2016 Jun;21:1-5 [Epub ahead of print].
11. Laskin DM. Etiology of the Pain-Dysfunction Syndrome. JADA archive 1969 Jul;79(1):147–53.
12. Schwartz LL. A TMJ Pain-Dysfunction Syndrome. J Chronic Dis Mar 1957;3(3):284-93.
13. Schwartz LL. Disorders of the Temporomandibular Joint. Philadelphia; 1959.
14. Manfredini D, Segù M, Arveda N, Lombardo L, Siciliani G, Rossi A, Guarda-Nardini L. Temporomandibular Joint Disorders in Patients With Different Facial Morphology. A Systematic Review of the Literature. J Oral Maxillofac Surg 2016 Jan;74(1):29-46.
15. De La Torre Canales G, Manfredini D, Grillo CM,
Guarda-Nardini L, Machado Gonçalves L, Rizzatti Barbosa CM. Therapeutic effectiveness of a combined counseling plus stabilization appliance treatment for myofascial pain of the jaw muscles: A pilot study. Cranio 2016 Apr;7:1-7.
16. Vollaro S, Michelotti A, Cimino R, Farella M, Martina R. Epidemiologic study of patients with craniomandibular disorders. Report of data and clinical findings. [Article in Italian] Minerva Stomatol 2001 Jan-Feb;50(1-2):9-14.
17. Tuncer AB, Ergun N, Tuncer AH, Karahan S. Effectiveness of manual therapy and home physical therapy in patients with temporomandibular disorders: A randomized controlled trial. J Bodyw Mov Ther 2013 Jul;17(3):302-8. doi: 10.1016/j.jbmt.2012.10.006. Epub Nov 16. 2012.
18. De Freitas RF, Ferreira MÂ, Barbosa GA, Calderon PS. Counselling and self-management therapies for temporomandibular disorders: a systematic review. J Oral Rehabil 2013 Nov;40(11):864-74. doi: 10.1111/joor.12098.
19. Michelotti A, Iodice G, Vollaro S, Steenks MH, Farella M. Evaluation of the short-term effectiveness of education versus an occlusal splint for the treatment of myofascial pain of the jaw muscles. JADA Middle East 2012 Mar-Apr;3(2).
20. Wirtz A, Zhang X. Amsterdam institute; Review: Which treatment is more effective in adults who suffer from TMD? Exercise therapy or splint therapy? Amsterdam Institute of Allied Health Education Hogeschool van Amsterdam Tafelbergweg 51 1105 BD Amsterdam.
21. Moraes AR, Sanches ML, Ribeiro EC, Guimarães AS. Therapeutic exercises for the control of temporomandibular disorders. Dental Press J Orthod 2013;18:134-9.
22. Roldán-Barraza C, Janko S, Villanueva J, Araya I, Lauer HC. A systematic review and meta-analysis of usual treatment versus psychosocial interventions in the treatment of myofascial temporomandibular disorder pain. J Oral Facial Pain Headache; Summer 2014.
23. Martins WR, Blasczyk JC, Aparecida Furlan De Oliveira M, Lagôa Gonçalves KF, Bonini-Rocha AC, Dugailly PM, De Oliveira RJ. Efficacy of muscu loskeletal manual approach in the treatment of temporomandibular joint disorder: a systematic review with meta-analysis. Man Ther 2016 Feb;21:10-7. doi: 10.1016/j.math.2015.06.009. Epub Jun 25. 2015.
24. Glaros AG, Marszalek JM, Williams KB. Longitudinal Multilevel Modeling of Facial Pain, Muscle Tension, and Stress. J Dent Res 2016 Apr;95(4):416-22.
25. Rampello A, Saccucci M, Falisi G, Panti F, Polimeni A, Di Paolo C. A new aid in temporomandibular joint disorders' therapy: the universal neuromuscular immediate relaxingappliance. J Biol Regul Homeost Agents 2013;27(4):1011-9.
26. Rampello A, Falisi G, Panti F, Di Paolo C. A new aid in TMD Therapy: the Universal Neuromuscular Immediate Relaxing appliance "UNIRA". Oral Implantol (Rome) 2010 Jan;3 (1):20-32. Epub Nov 19. 2010.
27. Di Paolo C, Cascone P. Diagnosis and management of TMJ disorders: gnathological issues. Dental Cadmos 2016;84(6):352-63.
28. Ferrante A, Reed-Knight E, Bello A, Comentale P.
Variazioni posturali conseguenti a cambiamento della posizione linguale ed a trattamento miofunzionale. Ortognatodonzia Italiana 2002;11(3).
29. Rollet D. The functional education with young children: the dysmorphis based on the functional problems. Arch Pediatr Jun;17(6):984. doi: 10.1016/S0929-693X(10)70210-4. 2010
30. Weber P, Corrêa EC, Bolzan GDE P, Ferreira FDOS S, Soares JC, Silva AM. Chewing and swallowing in young women with temporomandibular disorder. Codas 2013;25(4):375-80. Epub Aug 16. 2013
31. Parada C, Chai Y. Mandible and Tongue Development. Curr Top Dev Biol 2015;115:31-58. doi: 10.1016/bs.ctdb.2015.07.023. Epub Oct 1. 2015.
32. De Leeuw R. The Fifth Edition of The AAOP Guidelines for Assessment, Diagnosis and Management. Chicago: Quintessence; 2013.
33. Okeson JP. Il trattamento delle disfunzioni e dei disordini temporomandibolari. Bologna: Martina Edizioni; 2015.

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FDI Takes on the Challenge of Peri-implant Diseases Through New Partnership

06 June 2018 - FDI has developed the Peri-Implant Diseases Project (PIDP), in partnership with the International Congress of Implantologists (ICOI), to increase global awareness of periodontal health.

PIDP aims to make periodontal health a priority issue at the national level and integrate oral and periodontal health into general health policies.

Defining peri-implant diseases

According to the American Academy of Periodontology, peri-implant diseases are inflammatory conditions affecting the soft and hard gum tissues around dental implants.

Similar to a natural tooth, bacteria can build up on the base of the implant, below the gum line. Over time, the bacteria irritate the gum tissue, causing it to become inflamed, damaging the tissue and if not caught early, causing the bone structure below the implant to deteriorate.

There are two types of peri-implant diseases:

1. *peri-implant mucositis*, which is gum inflammation found around the soft tissues of the dental implant and may be reversible if detected early; and

2. *peri-implantitis*, which in addition to the gum inflammation around the soft tissue presents deterioration in the bone supporting the dental implant and usually requires surgical treatment.

What will come out of this project?

PIDP will inform the oral health community on the importance of peri-implantitis prevention, diagnosis, treatment and follow-up. In 2017, a group of four FDI and ICOI experts was appointed to work on PIDP. The experts identified 16 authors who were then tasked with producing one article each on a specific topic on peri-implant diseases.

At a workshop held in Zurich last May, the PIDP experts and authors met to review the articles and discuss practical recommendations for dentists on peri-implant diseases.

By the end of the workshop, experts and authors came to a consensus and drafted four recommendation articles (which are currently being finalized) to support dental practitioners – who are not specialized in implants – in their daily practice.

Key conclusions from the workshop will be presented at the World Dental Congress in Buenos Aires and at the ICOI Congress in Las Vegas.

According to the American Academy of Periodontology, peri-implant diseases are inflammatory conditions affecting the soft and hard gum tissues around dental implants.

British Dental Association Northern Ireland Champions Oral Health of Older Adults

04 July 2018 - The British Dental Association (BDA) Northern Ireland actively promotes the oral health needs of the elderly population. BDA Northern Ireland liaises with other eldercare advocates to raise awareness of the importance of addressing this often-overlooked aspect of healthcare for older people.

BDA Northern Ireland strives for oral health to be prioritized as a key element of the eldercare agenda.

"Now, more than ever, we have an increasingly dentate elderly population who require different and additional levels of care, but the resources simply haven't kept pace. It's vital that the oral healthcare needs of the older population are prioritized along with all the other aspects of their general health and well-being."
GRAINNE QUINN, BDA NORTHERN IRELAND REPRESENTATIVE AND CHAIR OF THE NORTHERN IRELAND SALARIED DENTISTS COMMITTEE

BDA Northern Ireland calls for increased investment in community and general dental services, so practitioners can offer a comprehensive and tailored approach to oral healthcare within the elderly community.

BDA Northern Ireland will continue to cultivate strong ties with other interested stakeholders to address the needs of ageing populations together.

The WOHF will illustrate examples of healthy ageing through a series of real-life examples of successful elderly oral healthcare models from Asia, Europe, and South America. The oral health community plays an indispensable role in ensuring that people age in a healthy and supported way.

The FDI World Dental Congress will be held from 5-8 September 2018.

The oral health community plays an indispensable role in ensuring that people age in a healthy and supported way

World Oral Health Forum to focus on healthy ageing at World Dental Congress in Buenos Aires

FDI is equally invested in promoting the oral health needs of older adults. **The World Oral Health Forum (WOHF) is held every year at the FDI World Dental Congress.**

This year's WOHF will build upon the work of FDI's Oral Health for an Ageing Population partnership (OHAP), which pursues opportunities to improve oral disease prevention and treatment for elderly patients and actively raises awareness on the need to conduct additional research in this subject area.

Please visit the official Congress website for more information on the WOHF on healthy ageing and other Congress events.

Oral Health for an Ageing Population

'Oral Health for an Ageing Population Partnership' seeks to raise awareness within FDI National Dental Associations on oral health for an ageing population, assessing, sharing outcomes globally and addressing issues at national and global level related to the current state of national and regional dental healthcare policies – and devising solutions to the identified problems.

Sugar, Tobacco and Alcohol Taxes are Being Underused, Say Leading International Experts

04 July 2018 - In a recently published commentary article in The Lancet, an international group of experts from the World Health Organization (WHO), UNICEF, the World Bank, as well as civil society leaders and other academics are calling for governments to adopt sugar, tobacco and alcohol taxes (STAX) to improve global health outcomes.

> The consensus among the world's leading public health experts is that more countries should be taxing sugar alongside alcohol and tobacco.

The article's authors maintain that STAX can meaningfully reduce the consumption of sugar, tobacco and alcohol – all risk factors for major oral diseases and other noncommunicable diseases (NCDs) that disproportionately affect people with low socioeconomic status. To this end, the article emphasizes that "scaled-up country support is needed to accelerate and implement STAX as a cost-effective fiscal policy to contribute to the [United Nations] Sustainable Development Goals."

The experts also report that despite strong opposition from the alcohol and food industries, STAX should be embraced as an indispensable policy tool for governments to improve public health. They cite compelling evidence from South Africa, Thailand and the Philippines where tobacco and alcohol taxes have significantly improved health outcomes for individuals and communities. Increasing revenues from STAX have also empowered more countries to fund public health initiatives and programmes.

The consensus among the world's leading public health experts is that more countries should be taxing sugar alongside alcohol and tobacco.

To date, only 28 countries have introduced a sugar tax. **The number of young people globally aged 5–19 years who are overweight and/or obese has dramatically increased from 11 million in 1975 to 124 million in 2016, with sugar consumption as a major contributor.** Surging levels of global sugar consumption thus represents a significant oral health and

NCD challenge. Without targeted investment in widespread preventative interventions the burden of oral diseases and other NCDs will continue to accelerate unabated. The article highlights Mexico as a prime example of a country where a sugar tax successfully reduced the consumption of sugar-sweetened beverages: a sugar tax was introduced in 2014 in response to the country's rapidly burgeoning obesity rates. The tax reduced sugar-sweetened beverage sales by 5% in the first year with a further 10% reduction in the second year. Devex, in partnership with the NCD Alliance, has released a video as part of its #TakingthePulse against NCDs campaign to explain the lessons that other countries can learn from Mexico's experience.

The ongoing debate about taxing sugar consumption comes at a critical juncture as countries prepare for the United Nations High-Level Meeting on NCDs (UN HLM on NCDs) on 27 September. In particular, there is an urgent need for governments to adopt a more holistic approach to taxation including sugar-sweetened beverages.

WHO's evidence-based guidance and reports, including the NCD Best Buys and the Commission on Ending Childhood Obesity, contends that taxation on sugar sweetened beverages is as an essential part of interventions that can help reduce obesity and NCDs.

At this year's FDI World Dental Congress in Buenos Aires ahead of the UN HLM on NCDs, FDI, NCD Alliance and the WHO will lead a joint session on sugar.

The session, entitled "Curbing the Sugar Rush: Tackling oral diseases and other NCDs through a unified approach", will inform attendees about strategies to reduce sugar consumption through evidence-based and cost-effective interventions.

The session will discuss potential policy measures include imposing higher taxation on sugar-rich foods and beverages, adopting transparent food and nutrition labelling and implementing public health education campaigns.

Curbing the Sugar Rush: Tackling oral diseases and other NCDs through a unified approach FDI-NCD Alliance-WHO joint session • **Friday, 7 September 2018 • 09:00-11:00**
Official Congress Website:
www.worlddentalcongress.org/mainpage/index.html

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FDI World Dental Federation
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T +41 22 560 81 50

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FDI World Dental Federation counts down to the annual FDI World Dental Congress

FDI World Dental Federation (FDI) looks forward to welcoming all attendees to Buenos Aires, Argentina, for the 2018 FDI World Dental Congress (WDC) from 5 to 8 September 2018. The WDC is a flagship event for FDI, strengthening ties and fostering collaboration within the global oral health community. Held under the theme 'A passion for many, a commitment for all', the WDC offers a unique opportunity to meet with leaders within the oral health profession from around the globe. To advance the art and science of dentistry, this annual event delivers a cutting-edge scientific programme, interactive forums and a dental exhibition attended by the most prominent figures in the dental industry.

The Congress will be held at La Rural, the most polished and prestigious convention centre in the country. Built in 1878, La Rural is a unique and exclusive site, thanks to its prime location in the heart of the city of Buenos Aires. Here, exhibitors will be able to display their equipment, products and services in a country known for its excellence in dental care.

The dental profession and the dental industry are essential partners in delivering oral health to populations around the world. Bridging the gap between the two is even more important today, as new materials and technology are developed to accommodate the latest treatment philosophies.

The dental industry exhibition is free and open to all Congress attendees.

The dental exhibition offers an important opportunity for international manufacturers to enhance their visibility in the South American dental market. The exhibition is expected to hold 250 booths from national and international manufacturers and suppliers in 5,500 square feet of exhibition space.

As they tour the exhibition, attendees are also encouraged to visit the FDI pavilion to learn more about FDI's latest oral health projects, from Smile Around the World, which recently promoted good oral health among schoolchildren in rural China, to reinforcing the link between oral health and healthy ageing through the Oral Health for an Ageing Population partnership.

At the pavilion, visitors are welcome to learn more about FDI's oral health advocacy activities and browse FDI's recently released publications, which cover topics from the diagnosis and treatment of periodontal diseases to oral cancer. Details about the 2019 World Oral Health Day campaign and next year's Congress destination will also be made available here.

FDI's official mascot, a giant beaver aptly called Toothie, will also be wandering around the Congress venue. All visitors are invited to take a photo with Toothie, upload it to their social media platforms, and be entered in a draw for a chance to win a trip to the 2019 Congress in San Francisco, California.

In addition to the industry dental exhibition, The Congress will feature a diverse scientific programme, with close to 100 speakers from around the globe leading sessions on trending oral health topics. Special events like the World Oral Health Forum will address the importance of good oral health for healthy longevity, and a joint session organized in partnership with the World Health Organization and the NCD Alliance will debate the alarming escalation of global sugar consumption.

Every element is in place to deliver an event that serves to strengthen ties between oral health professionals, industry innovators and committed stakeholders to raise the voice of the oral health community and advance the practice of dentistry worldwide.

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Henry Schein Signs Global Partnership Agreement with the International College of Dentists

Company Named Exclusive Centennial Partner for 2020 Centennial Celebration and Extends Support for the ICD Global Visionary Fund

MELVILLE, N.Y., June 14, 2018 – Henry Schein, Inc. (Nasdaq: HSIC) announced today that it has entered into a new partnership agreement with the International College of Dentists (ICD) to become the exclusive partner for the organization's centennial anniversary.

ICD, which has been *Honoring the World's Leading Dentists Since 1920*™, will organize a series of special events under the theme "Celebrating the First 100 Years." The events will take place throughout 2020, leading up to a gala celebration to be held during the ICD 2020 International Council meeting on November 13, 2020, in Nagoya, Japan.

Through Henry Schein Cares, the Company's global corporate social responsibility program, Henry Schein will partner with ICD to recognize the outstanding and meritorious contributions of its members and extend the global reach of both organizations to carry out and administer educational, training, and humanitarian initiatives.

The new agreement also extends Henry Schein's four-year commitment to ICD's Global Visionary Fund (GVF), a 501(c)(3) charitable fund that was created in 2013 to improve the oral health of the public and enhance the profession of dentistry. With support from Henry Schein Cares, GVF provides financial assistance to ICD Fellows and other volunteers doing charitable work, focusing its support on humanitarian dental care projects and continuing dental education initiatives. GVF emphasizes projects that demonstrate the possibility of creating sustainable improvement in oral health around the world.

"We are pleased to join with the International College of Dentists to remember its past, celebrate its future, and honor the professional achievements, service, and dedication of all College members and Fellows," said Stanley M. Bergman,

> "We are pleased to join with the International College of Dentists to remember its past, celebrate its future, and honor the professional achievements, service, and dedication of all College members and Fellows"
>
> Stanley M. Bergman, Chairman of the Board and Chief Executive Officer of Henry Schein, Inc.

Henry Schein and ICD leaders met at the Senior Leadership Conference in London to finalize the agreement making Henry Schein, Inc. the Centennial Partner for the College Centenary. (L to R) Steven Kess, Vice President, Global Professional Relations, and Simon Gambold, Vice President, EMEA Dental Group – Marketing, Henry Schein; S. Dov Sydney, ICD International Editor and General Chair of the College Centennial; Phillip Dowell, Director of College Development, ICD, and David Kochman, Vice President, Corporate Affairs, Henry Schein.

Chairman of the Board and Chief Executive Officer of Henry Schein, Inc. "Over the past 10 years, the relationship between ICD and Team Schein has grown ever stronger. Together, we recognize the important link between oral health and overall health and share a commitment to expanding access to health care for underserved communities around the world. We salute the International Council and its International Officers and Councilors who represent ICD's Sections and Regions for possessing the vision and leadership that was exhibited by its Founders a century ago."

HENRY SCHEIN®

Founded in 1920 by Dr. Louis Ottofy and Dr. Tsurukichi Okumura, the ICD reflects the shared vision of Drs. Ottofy and Okumura to recognize dentists who excel in professional collegiality and friendship while also advancing the progress of dentistry worldwide. Today, the ICD has more than 12,000 Fellows in 122 affiliated countries.

"This will be a remarkable global effort on the part of both the leadership of the College and our Fellows who will work together for an amazing year of celebration, camaraderie, and fellowship," said Dr. Dov Sydney, Centennial General Chair and ICD's International Editor and Director of Communications.

"We thank Henry Schein for its ongoing partnership, which is especially gratifying as we share a mutual commitment to contribute to the advancement of the profession of dentistry by fostering the growth and diffusion of dental knowledge worldwide."

All worldwide events will be publicized on the ICD website, www.icd.org, which will have a designated area specifically for centennial updates, information, and a global photo gallery.

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About Henry Schein, Inc.

Henry Schein, Inc. (Nasdaq: HSIC) is a solutions company for health care professionals powered by a network of people and technology. With more than 22,000 Team Schein Members serving more than 1 million customers globally, the Company is the world's largest provider of Business, Clinical, Technology, and Supply Chain solutions to enhance the efficiency of office-based dental, animal health, and medical practitioners.

The Company also serves dental laboratories, government and institutional health care clinics, and other alternate care sites. A Fortune 500® Company and a member of the S&P 500® and the Nasdaq 100® indexes, Henry Schein's network of trusted advisors provides health care professionals with the valued solutions they need to improve operational success and clinical outcomes.

The Company offers customers exclusive, innovative products and solutions, including practice management software, e-commerce solutions, specialty and surgical products, as well as a broad range of financial services.

Henry Schein operates through a centralized and automated distribution network, with a selection of more than 120,000 branded products and Henry Schein private-brand products in stock, as well as more than 180,000 additional products available as special-order items.

Headquartered in Melville, N.Y., Henry Schein has operations or affiliates in 34 countries. For more information, please visit

www.henryschein.com.

About Henry Schein Cares

Henry Schein Cares stands on four pillars: engaging Team Schein Members to reach their potential, ensuring accountability by extending ethical business practices to all levels within Henry Schein, promoting environmental sustainability and expanding access to health care for underserved and at-risk communities around the world.

Health care activities supported by Henry Schein Cares focus on three main areas: advancing wellness, building capacity in the delivery of health care services, and assisting in emergency preparedness and relief.

Firmly rooted in a deep commitment to social responsibility and the concept of enlightened self-interest championed by Benjamin Franklin, the philosophy behind Henry Schein Cares is a vision of "doing well by doing good."

Through the work of Henry Schein Cares to enhance access to care for those in need, the Company believes that it is furthering its long-term success.

"Helping Health Happen Blog" is a platform for health care professionals to share their volunteer experiences delivering assistance to those in need globally.

To read more about how Henry Schein Cares is making a difference, please visit our blog:

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Greater New York Dental Meeting

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The Greater New York Dental Meeting (GNYDM) is the largest Dental Meeting in the United States registering 52,733 attendees from all 50 states and 9,026 international attendees from 151 countries which includes 18,998 dentists, 4,523 dental assistants, 520 dental technicians and 4,102 hygienists.

Dental and Medical professionals are encouraged to roamed over 1,700 exhibit booths and over 700 companies for free to learn about the newest equipment and materials available from around the world.

The GNYDM offers over 350 seminars, hands-on workshops, and essays including programs in Spanish, French, Chinese, Russian and Korean. There is also a designated workshop room for live Portuguese translation for morning and afternoon sessions. As the GNYDM continues to increase its international population of attendees, it also continues to increase educational programs offered in other languages other than English.

The Greater New York Dental Meeting's partnership with the U.S. Department of Commerce International Buyer Program allowed exhibitors a free listing in our Export Interest Directory, the opportunity to meet many worldwide senior level volume buyers, export counseling by government specialists and additional benefits derived from our extensive international marketing efforts.

The newest program introduced this year is the 3D Printing and Digital Technology Conference. With 8 programs offered from Sunday – Wednesday of the Meeting, attendees are invited to learn the A to Z on 3D Technology.

The GNYDM included a Free and unique Health Screening Fair for two days of the Meeting, consisting of Oral Cancer, caries, hearing, blood pressure, Diabetes and vision screenings. This year the fair was open to numerous private sectors and to the public who were in need of care.

The World Implant EXPO increased in attendance and welcomes world renowned clinicians to New York City. Implant seminars and hands-on workshops are offered daily at the GNYDM in support with the International Congress of Implantologists, the American Academy of Implant Dentistry, the European Association of Osseointegration and new this year, the INDIAN Implant Symposium.

The Pediatric Dentistry Summit offers seminars and workshops from Sunday - Wednesday. The programs are packed with stan-

ding room only.
The Global Orthodontic Conference offers 6-concentrated Orthodontic Specialty programs; including seminars and hands-on workshops.
The "Live" Dentistry arena filled over 550 seats daily with standing room only for all four days. This revolutionary concept takes place right on the show floor with NO tuition costs to attendees. It should not be missed.
As the holiday season is a time for giving and helping others, the Greater New York Dental Meeting once again hosted the "Greater New York Smiles" fun and child-friendly program. Each year the GNYDM invites 1,500 NYC Public School children from all five New York City boroughs. The Smiles Program teaches nutrition and oral hygiene instruction in a fun and child-friendly atmosphere. This program is sponsored by Colgate, UFT and DentaQuest.

2018 Highlights
- 3D Printing and Digital Dentistry Conference
- World Implant EXPO
- Pediatric Dentistry Summit
- Global Orthodontic Conference
- Sleep Apnea Symposium
- Airway Summit
- Specialized New Dentist Program designed for graduates in the last 10 years
- Pre-Dental/Medical Program for the Undergraduate Student
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By: Jayme McNiff Spicciatie

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The International Federation of Dental Educators and Associations (IFDEA) is **a global community of dental educators,** who have joined together to improve oral health worldwide by sharing knowledge and raising standards. University professors and Dental Educators refer to this Federation.

IFDEA TASKS

IFDEA contributes to improving global health by improving oral health. IFDEA serves as an axis of information, best practices, exchange programmes, news and professional development for the many dental education international associations (**ADEE** in Europe, **ADEA** in North America, **AfDEA** in Africa, **SEAADE** in South East Asia, in Latin America and Japan), dental academic institutions and individual dental educators worldwide.

IFDEA conferences in Italy
From 25th to 27th April 2019, the University of Brescia School of Dentistry will host two historically separate international meetings that share common goals related to dental education – advancing professional and personal development, encouraging cross collaboration, and increasing important network opportunities.

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Fishermen in Poole receive free dental care at quayside

FISHERMEN in Poole received free dental treatment when a mobile dental unit visited the quayside.

The joint project between international dental charity Dentaid, the Fishermen's Mission and The Seafarers' Hospital Society (SHS) was established for fishermen who find it hard to access dental care because they work long days out at sea.
Dentaid's mobile dental unit parked on the quayside and volunteer dental professionals offered fishermen a dental check-up as they came ashore on Monday (July 2). Treatments included extractions, fillings, scale and polish and oral heath advice. Many fishermen are not registered with a dentist and live with persistent dental pain.

"I haven't seen a dentist since I was 12 and I've become so self-conscious about the state of my teeth that I cover my mouth with my hand when I talk to people," said the first patient, Pete Williams, who had a scale and polish and filling on the mobile unit. "I would have liked to go to a dentist but if my appointment was on a good day for fishing I would have to go out to sea otherwise we'd have no money. I often work 18 hour days and fishermen don't get paid time off for dental appointments. As my teeth got worse I worried I'd need lots of visits to the dentist so I just put up with it. The mobile unit coming here has been brilliant because I can get everything done in one go."

Some of the fishermen who visited the mobile clinic said the cost of dental care was a barrier to them accessing treatment. "I was registered but I couldn't afford to keep going," said fisherman Dave Green. His nephew Dan Green who had two painful teeth extracted added: "I've had toothache for so long but I can't get to a dentist. As a fisherman I find it very hard to find time and money to look after myself. There are lots of issues affecting us like homelessness and poverty so get-

"We were very pleased to provide fishermen in Poole with dental care on our mobile unit and understand some of the difficulties they face accessing treatment," said Dentaid CEO Andy Evans.
"The mobile unit takes dental care right to the communities who need our help and we hope we can now repeat the project in Poole and visit other fishing communities around the country."

ting to a dentist isn't ever top of the list."
"We were very pleased to provide fishermen in Poole with dental care on our mobile unit and understand some of the difficulties they face accessing treatment," said Dentaid CEO Andy Evans. "The mobile unit takes dental care right to the communities who need our help and we hope we can now repeat the project in Poole and visit other fishing communities around the country."
SHS Health Development Manager Lysanne Wilson said: "Dental health is just as important as physical and mental health, but when you're out at sea it's often not a priority. We're making it easy by bringing free dental treatment to the harbourside, so it fits around the fishermen and their busy working lives. We believe that by partnering with Dentaid and the Fishermen's Mission, who closely support fishermen and their families, we can make a real and lasting difference to the fishing community, not just in Poole but in other fishing communities around the country."
Nick O'Neill, Superintendent for Fishermen's Mission, South Coast said "Dentaid treated 7 very grateful fishermen in Poole, saving them time and money and preventing needless pain too. That has to be good for the fishermen and good for business too. Fishermen have traditionally experienced problems accessing health services due to the nature of their job and the irregular hours they work. We are committed to improving the welfare of our fishermen and this harbourside dental service enables the crews and their families to drop in and have a check-up, something they probably haven't done in years."
The Poole initiative is part of a larger dental health care project being piloted by the Society in partnership with the Fishermen's Mission. Lysanne added: "We have a programme of free dental checks and treatment that we're currently roll-

ing out across the South West and elsewhere, using Dentaid and other non-profit providers to deliver the service. The response so far has been excellent and we're very excited about the prospect of doing more."

Dentaid's mobile unit also visits homeless shelters, day centres and soup kitchens across the UK providing dental treatment for vulnerable people who find it difficult to access NHS treatment.
For press inquiries contact press officer at Dentaid
Ms. Jill Harding on +44 1794 324249 or **jill@dentaid.org.**

dentaid

About Dentaid
Dentaid was founded in 1996 and works to improve oral health around the world. The charity sends volunteer dental professionals and reconditioned equipment to support the work of dentists in poor and remote communities. Dentaid also runs education, training and toothbrushing programmes.

In 2015 Dentaid expanded its work to the UK with an oral health education programme called BrightBites and the purchase of the mobile dental unit which is used to deliver dental care for people who find it difficult to access treatment.
About the Seafarers Hospital Society
• The Seafarer's Hospital Society (SHS) is a maritime welfare charity that has been caring for the health and welfare of seafarers since 1821.
• The Society is piloting a new service offering free dental health checks and subsidised follow-up treatment to fishermen and their families in a range of UK locations.
• Other health and welfare services provided by the Society include free, rapid-access physiotherapy and access to free mental health and wellbeing support through Big White Wall.
• For more about SHS and their work on health and welfare, see www.seahospital.org.uk , email Lysanne Wilson lysannewilson@seahospital.org.uk or call +44 20 8858 3696.

About the Fishermen's Mission

• The Fishermen's Mission is the only national charity that solely provides help to active and retired fishermen and their families.

• Established in 1881, the Fishermen's Mission offers financial, practical and pastoral support as well as providing a 24/7 emergency response to accidents or illness at sea.

• We remain committed to improving the welfare, safety and lifestyles of active and retired fishermen, meeting them on the quayside and in their homes.

• For further information regarding the work of the Fishermen's Mission please contact **alisongodfrey@fishermensmission.org.uk** or visit our website **www.fishermensmission.org.uk**

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420 dental professionals participated in kick-off of the 2018 BioHorizons Global Education Tour in Croatia

June 29th, 2018 – The 2018 BioHorizons Global Education Tour (GET) offers cutting-edge insights on implant therapy through presentations by leading clinical experts in six countries around the globe. The tour kicked off in May in Dubrovnik, Croatia with participation from 420 dental professionals representing more than 40 countries. The attendees of the Croatia Symposium had the opportunity to experience innovative clinical solutions and forward-looking evidence-based protocols to that will help them achieve new levels of patient care and practice efficiency.

The educational program, driven by internationally recognized speakers, focused on the management of advanced surgical procedures, regenerative solutions in the aesthetic zone, restorative results, and the world of digital dentistry.

In addition, a pre-congress workshop with a hands-on component was offered featuring the BioHorizons TeethXpress® protocol. TeethXpress® provides a full-arch treatment continuum including prosthetic planning for immediate loading cases, surgical procedures for achieving high primary stability, techniques for the fabrication of a screw retained provisional, prevention and management of complications, and fast tracking of the prosthetic workflow.

Steve Boggan, President and Chief Executive Officer of BioHorizons, delivered opening remarks and highlighted some of the current trends that are changing implant dentistry. "We can see that digital dentistry is rapidly replacing traditional restorative pathways and that procedures are getting less invasive," he stated. "As one of the leading companies in the dental implant community, BioHorizons is committed to driving aesthetic implantology forward through science, innovation, and education."

Dr. Carlos Repullo, speaking at the BioHorizons Global Education Tour kick-off in Croatia about "DAP technique: Digital Assisted Protocol for dental implant treatments"

With topics covering digital workflow, immediate loading, tissue regeneration, aesthetics, full-arch solutions, and multidisciplinary teams, the 2018 Global Education Tour addressed a wide range of implant dentistry challenges.

Upcoming tour locations and dates include:

- Italy (Taormina, on June 30th, 2018)
- Colombia (Bogotá, on August 24 – 25th, 2018)
- India (Mumbai, on September 1st, 2018)
- Spain (Madrid, on October 27th, 2018)

Further information about and registration for the upcoming 2018 BioHorizons Global Education Tour is available on GET.biohorizons.com.

The education partner for the BioHorizons Global Education Tour is the Oral Reconstruction Foundation, a not-for-profit foundation that sponsors research, training and education in the field of implant dentistry and related areas. As a continuing education provider through the Academy of General Dentistry, the Oral Reconstruction Foundation has approved the main program for 14 hours of CE credit.

Audience

The BioHorizons expert team and dental professionals in the exhibition area at the BioHorizons Global Education Tour in Croatia

About BioHorizons

BioHorizons is part of Henry Schein, Inc. (NASDAQ:HSIC) and a leading global provider of dental implants and tissue regeneration products for dentists and dental specialists. The company has a broad product offering, including dental implants, guided surgery, digital restorations and tissue regeneration solutions for the replacement of missing teeth. BioHorizons products are available in 90 countries around the world. For more information, visit biohorizons.com.

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UNIVERSITY OF BRESCIA

Two International Dental Education Meetings Planned for 2019

In April 2019, the University of Brescia School of Dentistry will host two historically separate international meetings that share common goals related to dental education – advancing professional and personal development, encouraging cross collaboration, and increasing important networking opportunities.

"ADEA/ADEE SHAPING THE FUTURE OF DENTAL EDUCATION II"

will be held in the University of Brescia, Italy on 25th to 27th April 2019
A joint ADEA/ADEE partnership

In May 2017, the Association for dental Education in Europe (ADEE) and the American Dental Education Association (ADEA) hosted the first edition of "ADEA/ADEE Shaping the Future of Dental Education" at King's College in London. The first truly global meeting in nearly a decade focused on dental education welcomed more than 270 dental educators from nearly 50 countries. The four workshop areas were *Global Networking, Interprofessional Education and Practice, Assessment, and Emerging Science and Technology.*

For more information
www.adee.org/meetings/london2017/conclusions/index.html

"SIXTH ADEA INTERNATIONAL WOMEN'S LEADERSHIP CONFERENCE"

The ADEA International Women's Leadership Conference is one of ADEA's pioneering initiatives to support gender equity in global health and the inclusion of oral health in global targets for disease eradication. Established in 1999 to recognize the increased leadership role of women in the global health workforce, the previous five conferences (France, Canada, Sweden, Brazil, Spain) brought together participants from six continents to consider strategies for advancing women's leadership in global health, academic dentistry and research. The meeting proceedings are published as supplements to the *Journal of Dental Education.*

Meeting Objectives

- Maximize opportunities for international collaboration in education and research.
- Develop goals that promote WHO global health objectives for disease eradication.
- Promote interprofessional education and collaborative practice objectives for improved access, quality and health outcomes.
- Share best practices for academic/community partnerships for experiential learning and clinical care.
- Create faculty development opportunities for innovation, exchanges and international collaboration.
- Develop synergy among academic leaders that promotes change through collaborative efforts and mutual respect.
- Potentiate the effectiveness of the increasing role of women in academia, research and global community health. In the United States, 37% of full-time faculty are women.
- Lead curriculum innovation and changes that result from scientific discovery, emerging technologies and therapeutics.

Why are these meetings important to corporations?

- The in-tandem schedule will potentiate outcomes of both meetings through strategic approaches that link leadership with academic goals and global health outcomes.
- The meetings will identify contributing factors that support the science base for dental education, opportunities for collaboration, advances in technology, and other visionary forecasts for clinical practice in the future.
- Diversity and gender equity are increasingly present on global forum agendas- economic, competitiveness, labor force, health, and value-added perspectives.

About ADEA/ADEE Special Interest Group

The American Dental Education Association (ADEA) and the Association for Dental Education in Europe (ADEE) have had a strong historical relationship based on a mutual desire for the advancement of dental education systems. While there are differences between the two associations' contextual environments and operational activities, in recent years it has become clear that the challenges faced by the associations and by their respective memberships are becoming ever more interrelated.

To help explore and investigate these areas of commonality, the ADEE-ADEA collaborative's Special Interest Group (SIG) was introduced at the ADEE annual meeting in Riga, Latvia in 2014. The SIG has since held collaborative meetings on the rapidly changing international dental education context.

http://shapingdentaleducation.org
www.adee.org
www.adea.org

For more information or to discuss sponsorship opportunities, please contact Ms. Alessia Murano at

alessia.murano@infodent.com

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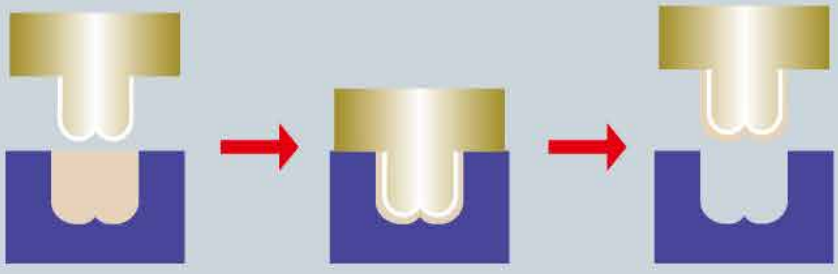

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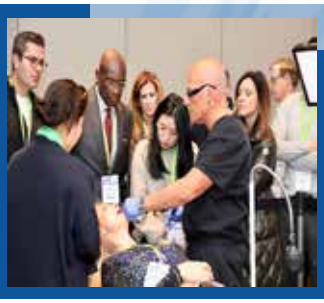


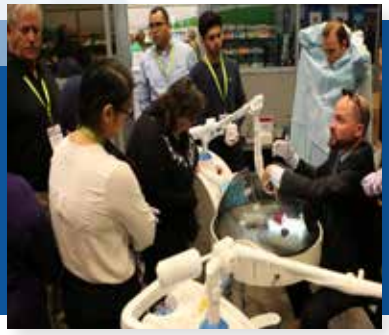

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