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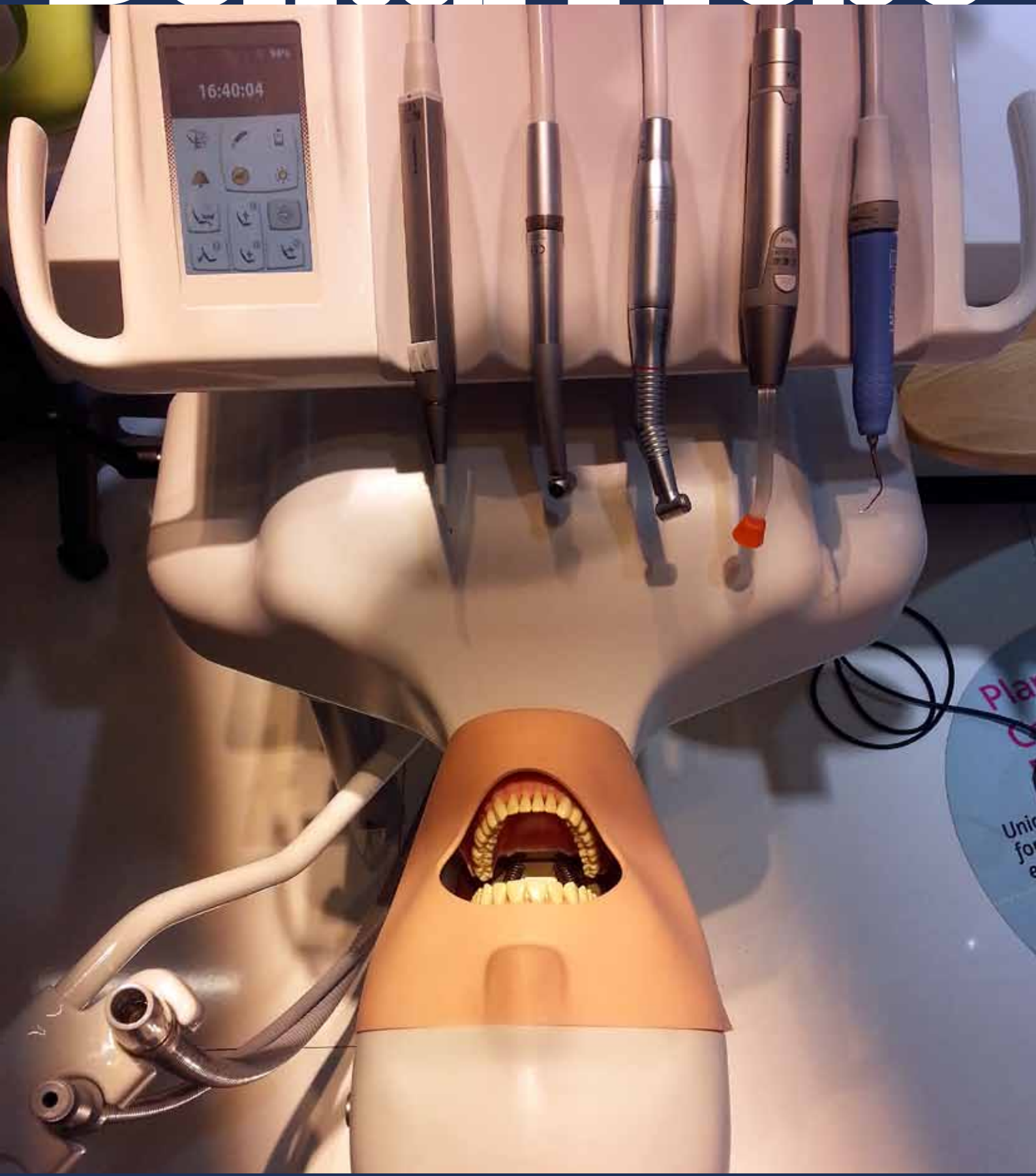
The Dental Probe

The Maltese Dental Journal



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1. Du MQ *et al*. Am J Dent 2008; 21(4): 210–214. **2.** Pradeep AR *et al*. J Periodontol 2010; 81(8): 1167–1173. **3.** Salian S *et al*. J Clin Dent 2010; 21(3): 82-87. Prepared November 2011, Z-11-496. **4.** Tai BJ *et al*. J Clin Periodontol 2006; 33: 86-91. **5.** Devi MA *et al*. Int J Clin Dent Sci 2011; 2: 46-49. **6.** GSK data on file (study 23690684) **7.** LaTorre G, Greenspan DC. J Clin Dent 2010; 21(3): 72-76. **8.** Edgar WM. Br Dent J 1992; 172(8): 305-312. **9.** Burwell A *et al*. J Clin Dent 2010; 21(Spec Iss): 66–71. **10.** Efflandt SE *et al*. J Mater Sci Mater Med 2002; 26(6): 557-565. **11.** de Aza PN *et al*. J Mat Sci: Mat in Med 1996; 399–402. **12.** Arcos D *et al*. A J Biomed Mater Res 2003; 65: 344–351. **13.** Earl J *et al*. J Clin Dent 2011; 22[Spec Iss]: 62-67. (A) **14.** Parkinson C *et al*. J Clin Dent 2011; 22(Spec Issue): 74-81. **15.** West NX *et al*. J Clin Dent 2011; 22(Spec Iss): 82-89. **16.** Earl J *et al*. J Clin Dent 2011; 22(Spec Iss): 68-73. (B) **17.** Wang Z *et al*. J Dent 2010; 38: 400–410. **18.** "Dentifrices" Encyclopedia of Chemical Technology 4th ed. vol 7, pp. 1023-1030, by Morton Poder Consumer Products Development Resources Inc. **19.** van der Weijen GA and Hioe KPK. J Ciul Periodontal 2005; 32 (Supp 1.6): 214-228.

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DENTAL ASSOCIATION OF MALTA
The Professional Centre,
Sliema Road, Gzira
Tel: 21 312888
Fax: 21 343002
Email: info@dam.com.mt

Editorial

By Dr David Muscat

Dear colleagues,

The recent and upcoming DAM events are listed on the right. We are now planning a clay pigeon shooting event followed by dinner for our members. We hope to encourage dentists to take up sporting hobbies. We are also going to organise a lecture/ dinner with Mr Stephen Spiteri military architecture historian at the Mediterranean conference Centre.

We would like to sadly announce the passing away of the husband of Marcelle Abela, our Federation Secretary. May he rest in peace. We would like to sadly announce that Dr Alan Kendall who recently worked in Malta died of cancer last week. Sincere condolences to his wife and family. May he rest in peace.Dr Kendall recently lectured us on Hypnosis in Dentistry and his slides on Hypnosis featured in a Probe issue last year.

I would like to thank all the committee especially Dr Lino Said for working hard to ensure that all our events are a success. We would also like to thank our sponsors. I wish you all a well deserved summer break.

This month's cover picture was kindly provided by Dr Christian Vella

Best regards,

David

Dr David Muscat B.D.S. (LON)
Editor / President, P.R.O., I.R.O. D.A.M.

Dr David Muscat President DAM presenting a cheque for 500 euro to Mrs Louise Pisani President of Equal Partners Foundation, a parent run charity for children with special needs at the Equal Partners annual Christmas Party at Villa Arrigo .The money was raised at the DAM Christmas Party raffle at the Excelsior hotel on 6 December 2013. Every year the DAM raises money for charity and we thank our numerous sponsors for their gifts and donations.

RECENT/PLANNED EVENTS

21 MAY
Golf lesson followed by dinner at Marsa Sports Club. This was very well attended with about 14 attending the lesson by a professional golf instructor and 20 for an excellent dinner at the Marsa club later. The event was organised in conjunction with Dr David Debono.

13 JUNE
Lecture on Skin Lesions of the Lip by Dr Michael Boffa MD FRCP MSC Consultant Dermatologist and President of the Malta Eczema Society. Sponsor GUM – Collis Williams. Venue the Victoria Hotel followed by a BBQ.

23 JULY
Clay Pigeon shooting event at Maghtab followed by dinner at Charlie's Inn

3 SEPTEMBER
"Wear is the Problem" by Professor Brian Millar BDS FRCS PhD – professor and consultant in Restorative Dentistry at Kings College London, Director of blended learning Prosthodontics programme at KCL. The lecture will deal with case assessment, treatment planning, prevention and intervention strategies and techniques to restore teeth. Restoration of Occlusion will also be covered. Dr Anne Meli Attard is helping us organise this. Kindly sponsored by Abbott

THE ADF DENTAL EXHIBITION IN PARIS NOVEMBER 2013

Dr. David Muscat President of the Dental Association of Malta attended the Congres ADF-the International Dental Exhibition at The Palais des Congres in Porte Maillot in Paris which was held between 27-30 November 2013.

A vast number of dental companies as well as dental laboratories were represented with concurrent lectures, seminars and demonstrations on innovative materials, techniques and equipment. An exhibition area over several floors was utilised with hundreds of stands on each floor. There were companies from as far as Brazil, Australia and America. It was hive of activity with a French slant.

The exhibition is held yearly. One needs to register online. An electronic badge is sent by e mail which is your bar code badge which you present at reception where your permanent pass is printed.

HOW CAN **ARTICAINE** IMPROVE MY DAILY CLINICAL PRACTICE?

By Rui Figueiredo – Oral Surgery and Implantology Department,
IDIBELL Biomedical Research Group, University of Barcelona

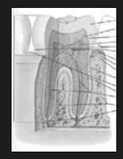
Local anesthesia

- "Loss of sensation in a circumscribed area of the body caused by a depression of excitation in nerve endings or an inhibition of the conduction process in perypheral nerves."

Malamed SF (ed). Handbook of local anesthesia. 5th ed. St. Louis: Mosby, 2004.

Ideal features

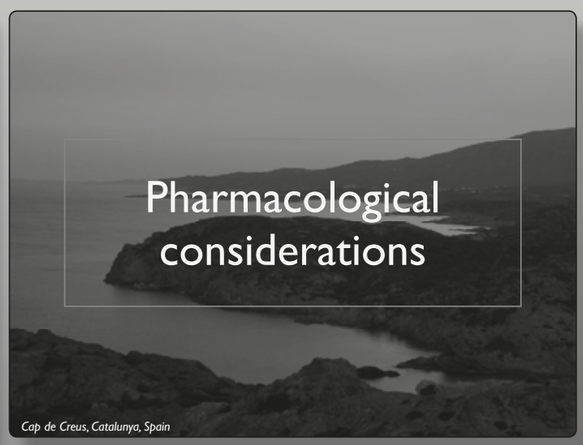
- Topical effect in mucous membranes.
- Not irritanting to the tissues.
- No permanent alteration of the nerve.
- Low systemic toxicity.
- Short onset time.
- Adequate duration.



Malamed SF (ed). Handbook of local anesthesia. 5th ed. St. Louis: Mosby, 2004.

Dental anesthetics

- Amino esters:
  - Procaine.
  - Tetracaine.
  - Benzocaine.
- Amino amides:
  - Lidocaine.
  - Mepivacaine.
  - Prilocaine.
  - Articaine.
  - Bupivacaine.



Continues on page 9.

Non-stick effect for efficient contouring

Ivoclar Vivadent has developed the innovative modelling instrument OptraSculpt® Pad in order to meet the demand for efficient processing of highly-esthetic composites.

Despite the excellent mechanical properties of composite materials, their contouring remains a very demanding task for dentists even today. Highly esthetic composites, in particular, sometimes demonstrate a very adhesive consistency due to their filler composition, and they are thus more difficult to shape.

OptraSculpt® Pad is a contouring instrument with special foam pad attachments, which is designed for the efficient, non-stick forming and shaping of composites. It is especially suitable for the contouring of class III, IV and V restorations as well as of direct veneers.

Suitable for dental technicians:
OptraSculpt Pad is also optimally suitable for applying and modelling lab composites. Therefore, the efficient processing of composites is equally supported in dental labs.

Non-stick shaping and contouring
The non-stick attachments of OptraSculpt Pad enable composite materials to be shaped and contoured with ease, without leaving any unwanted marks. Thus, composite restorations with smooth and even surfaces are fabricated with utmost efficiency.


Shaping and contouring with OptraSculpt Pad


Shaping and contouring with a metal spatula

Smooth and even surfaces
Due to the special material of the pads, natural-looking restorations are easily accomplished in only a few steps. The highly flexible synthetic foam pads optimally adjust to the anatomical contours and allow smooth modelling.


Result achieved with OptraSculpt Pad


Result achieved with a metal

Professional esthetic results
The reference scales on the instrument handle assist in the creation of esthetic and anatomically-correct restorations. The markings allow the clinical situation to be compared with the ideal average tooth width proportions and angular alignments in the upper anterior dentition.


Reference scale 1


Reference scale 2

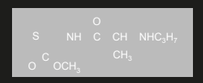
For further information, please visit www.ivoclarvivadent.com

HOW CAN **ARTICAINE** IMPROVE MY DAILY CLINICAL PRACTICE?

Continues from page 5.

Chemical configuration

- Tertiary amine (hydrophilic).
- Thiophene ring (lipophilic).
- Amide-type.
- Ester group.



Berini-Aytés L, Gay-Escoda C (eds.). Anestesia Odontologica. 3rd ed. Madrid: Ediciones Avances, 2005.

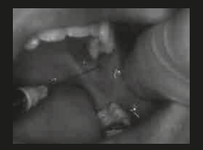
Articaine hydrochloride

- Introduced (carticaine):
  - Europe: 1976.
  - FDA approval (US): 2000.
- Potency: 1.5 times that of lidocaine.
- Metabolism:
  - Plasma and liver (articainic acid - inactive).
- Excretion:
  - Kidneys.

Oertel R, Berndt A, Kirch W. Saturable In Vitro metabolism of articaine by serum esterases. Reg Anesthesia 21:576-581.

Articaine hydrochloride

- pKa: 7.8.
- Good difusion through bone.
- Onset of action:
  - Infiltration: 1 to 2 min.
  - Mandibular block: 2 to 2.5 min.
- Duration of analgesia:
  - Pulpal: 60-75 min.
  - Soft-tissue: 180-360 min.

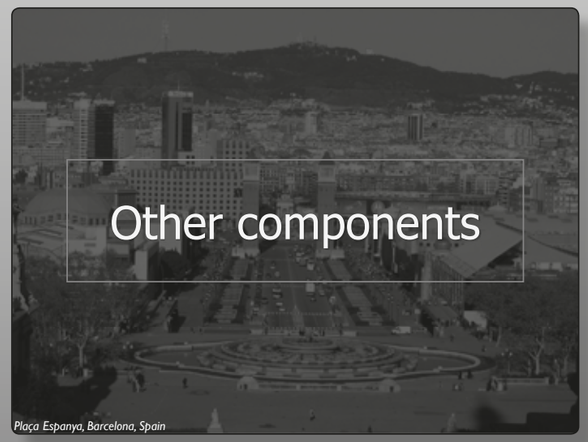


Berini-Aytés L, Gay-Escoda C (eds.). Anestesia Odontologica. 3rd ed. Madrid: Ediciones Avances, 2005.

Articaine hydrochloride

- Maximum dose: 7.0 mg/Kg (500 mg).
  - 7 cartridges.
- Commercially available:
  - 4% solution.
  - 1:100 000 epinephrine.
  - 1:200 000 epinephrine.

Berini-Aytés L, Gay-Escoda C (eds.). Anestesia Odontologica. 3rd ed. Madrid: Ediciones Avances, 2005.



Artinibsa

- Articaine HCl.
- Epinephrine:
  - 1:100 000.
  - 1:200 000.
- Free of:
  - Methylparaben.
  - EDTA (quelating).
- Sodium metabisulphite
  - Antioxidant.
- Sodium chloride
  - To keep it isotonic
- pH adjuster:
  - Sodium hydroxide
  - Hydrochloric acid

Continues on page 10.

HOW CAN **ARTICAINE** IMPROVE MY DAILY CLINICAL PRACTICE?

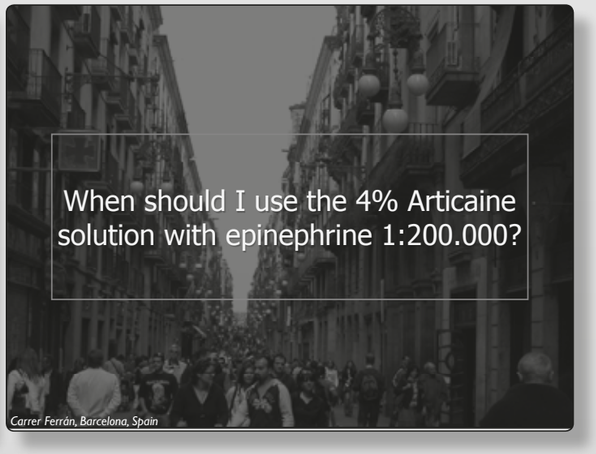
Continues from page 5.

Epinephrine

- Vasoconstrictor.
- Longer effect.
- Less systemic absorption.
- Less toxicity.
- Less operative and postoperative bleeding.
- Contraindications.
- Maximum dosage: 0.2 mg.

Sveen K. Effect of the addition of a vasoconstrictor to local anesthetic solution on operative and postoperative bleeding, analgesia and wound healing. Int J Oral Surg. 1979;8:301-6.

Malamed SF (ed). Handbook of local anesthesia. 5th ed. St. Louis: Mosby, 2004.



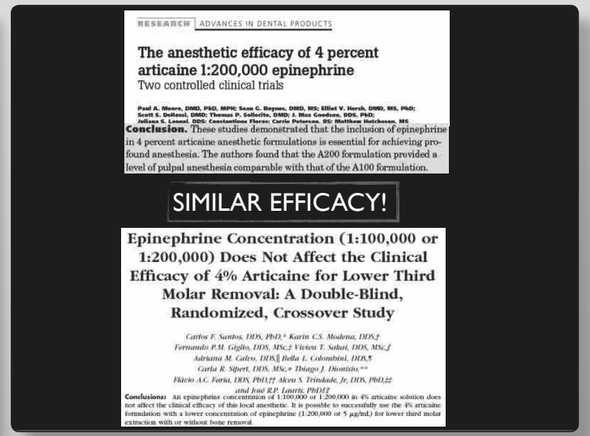
Carrer Ferrán, Barcelona, Spain

Clinical applications

- In Germany (2002), articaine was used by 92% of the dentists.
- United States estimated market share (Oct. 2006):
  - Lidocaine HCl: 47%.
  - Articaine HCl: 26%.
  - Mepivacaine HCl: 15%.
  - Prilocaine HCl: 6%.
  - Bupivacaine: 1%

1:200 000 epinephrine

- Specially suitable for:
  - Significant cardiovascular disease.
  - Thyroid dysfunction.
  - MAO inhibitors.
  - Tricyclic antidepressant.
  - Maximum dosage: 0.04 mg (4.4 cartridges)
- Very effective.


RESEARCH | ADVANCES IN DENTAL PRODUCTS

The anesthetic efficacy of 4 percent articaine 1:200,000 epinephrine
Two controlled clinical trials

Paul A. Moore, DMD, PhD, MPH; Sean C. Boynes, DMD, MS; Elliot V. Hersh, DMD, MS, PhD; Scott S. DeRossi, DMD; Thomas P. Sollecito, DMD; J. Max Goodson, DDS, PhD; Juliana S. Lowel, DDS; Constantinos Flores; Carrie Peterson, BS; Matthew Hutcheson, MS

Conclusion. These studies demonstrated that the inclusion of epinephrine in 4 percent articaine anesthetic formulations is essential for achieving profound anesthesia. The authors found that the A200 formulation provided a level of pulpal anesthesia comparable with that of the A100 formulation.

SIMILAR EFFICACY!

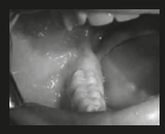
Epinephrine Concentration (1:100,000 or 1:200,000) Does Not Affect the Clinical Efficacy of 4% Articaine for Lower Third Molar Removal: A Double-Blind, Randomized, Crossover Study

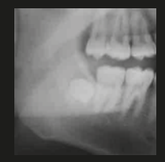
Carlos F. Santos, DDS, PhD, Karin C.S. Modena, DDS,† Fernando P.M. Gigilio, DDS, MSc,‡ Vivien T. Sabuti, DDS, MSc,‡ Adriana M. Calvo, DDS,§ Bella L. Colombini, DDS,¶ Carla R. Sipert, DDS, MSc,# Thiago J. Dionizio,** Flávio A.C. Faria, DDS, PhD,†† Alceu S. Trindade, Jr, DDS, PhD,‡‡ and José R.P. Lauris, PhD‡‡*

Conclusions: An epinephrine concentration of 1:100,000 or 1:200,000 in 4% articaine solution does not affect the clinical efficacy of this local anesthetic. It is possible to successfully use the 4% articaine formulation with a lower concentration of epinephrine (1:200,000 or 5 μg/mL) for lower third molar extraction with or without bone removal.

Clinical applications

- Infiltration.
- Inferior alveolar nerve block.
- In our department:
  - Approx. 4 500 extractions of third molars each year.
  - Articaine is used in more than 95% of cases.





Sagrada Familia, Barcelona, Spain

RESEARCH | ADVANCES IN DENTAL PRODUCTS

The pharmacokinetics and cardiovascular effects of high-dose articaine with 1:100,000 and 1:200,000 epinephrine

Elliot V. Hersh, DMD, MS, PhD; Helen Giannakopoulos, DMD, MD; Lawrence M. Levin, DMD, MD; Stacey Secreto; Paul A. Moore, DMD, PhD, MPH; Carrie Peterson, BS; Matthew Hutcheson, MS; Mohammed Bouhajib, MS; Ari Mesenkis, MD; Raymond R. Townsend, MD

Conclusions. Maximum dose recommendations for the A100 solution also can be applied to the A200 solution. A200 produces less cardiovascular stimulation than does A100.

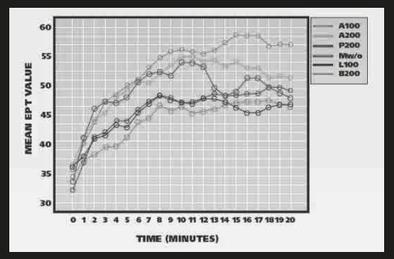
LESS SYSTEMIC TOXICITY

The cardiovascular effect of local anesthesia with articaine plus 1:200,000 adrenalin versus lidocaine plus 1:100,000 adrenalin in medically compromised cardiac patients: a prospective, randomized, double blinded study

Sharon Elad, DMD MSc,[a] Dan Admon, MD,[b] Meirav Kedmi, MD,[c] Eitan Naveh, PhD,[d] Esti Benzki, DMD,[e] Sharon Ayalon, DMD MSc,[f] Alex Tuchband, ET,[g] Haim Lutan, MD,[h] Eliezer Kaufman, DMD,[i] Jerusalem and Haifa, Israel
HEBREW UNIVERSITY – HADASSAH SCHOOL OF DENTAL MEDICINE, HADASSAH UNIVERSITY MEDICAL CENTER, AND TECHNION ISRAELI INSTITUTE OF TECHNOLOGY

Conclusions. LA with articaine 4% with adrenalin 1:200,000 was comparably as safe as LA with standard concentrations of lidocaine and adrenalin in cardiovascular patients. Cardiac ischemic changes on ECG did not appear to be related to the LA. (Oral Surg Oral Med Oral Pathol Oral Radiol Endod 2008;105:725-30)

Abdulwahab M, Boynes S, Moore P, Seifikar S, Al-Jazzaf A, Alshuraidah A, et al. The efficacy of six local anesthetic formulations used for posterior mandibular buccal infiltration anesthesia. J Am Dent Assoc 2009;140:1018-24.



4% Articaine with 1:200 000 epinephrine showed better results than 3% mepivacaine.

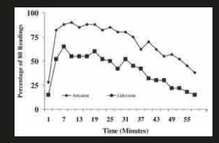
Maxillary infiltration

- RCT (CONSORT guidelines)
- Crossover design.
- 80 patients.
- Lidocaine Vs. Articaine:
  - 1:100 000 epinephrine.
  - 1st molar.
  - Lateral incisor.

Evans G, Nusstein J, Drum M, Reader A, Beck M. A prospective, ramdomized, double blind comparison of articaine and lidocaine for maxillary infiltrations. J Endod. 2008;34:389-93.

A Prospective, Randomized, Double-blind Comparison of Articaine and Lidocaine for Maxillary Infiltrations

Grace Evans, DMD, MS,[a] John Nusstein, DDS, MS,[f] Melissa Drum, DDS, MS,[f] Al Reader, DDS, MS,[f] and Mike Beck, DDS, MA[f]



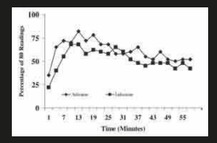


TABLE 1. The Onset of Pulpal Anesthesia (minutes ± standard deviation)

	Articaine	Lidocaine
Lateral incisor*	2.5 (±1.22)	3.0 (±1.73)
First molar†	3.3 (±2.35)	3.7 (±2.29)

"...4% articaine with 1:100 000 epinephrine statistically improved anesthetic sucess when compared with 2% lidocaine with 1:100.000 epinephrine in the lateral incisor but not in the first molar."

Continues on page 12.

HOW CAN **ARTICAINE** IMPROVE MY DAILY CLINICAL PRACTICE?

Continues from page 11.

Articaine and lignocaine efficiency in infiltration anaesthesia: a pilot study

P. C. Oliveira,[1] M. C. Volpato,[2] J. C. Ramacciato[3] and J. Ranali[4]

- Double-blind cross-over study.
- Buccal and palatal infiltration in upper canine.
- 20 healthy volunteers.

Table 1 Median (range) to onset of action and pulpal and soft tissue anaesthesia (in minutes) and palatal pain sensitivity (in cm) with articaine and lignocaine solutions.

Anaesthetic solution	Onset of action (min)	Pulpal anaesthesia (min)	Soft tissue anaesthesia (min)	Palatal pain sensivity (cm)
4% articaine with 1:100,000 adrenaline	1.0 (1.0 – 13.0)	67.0 (27.0 – 117.0)	238.5 (168.0 – 308.0)	1.57 (0 – 10.0)
2% lignocaine with 1:100,000 adrenaline	3.0 (1.0 – 7.0)	46.5 (25.0 – 107.0)	227.5 (159.0 – 273.0)	1.86 (0 – 10.0)

Articaine had a better performance although no significant differences were found.

Maxillary infiltration

- 40 patients.
- Irreversible pulpitis.
  - Real clinical situation!
- Lidocaine Vs. Articaine:
  - 1:100 000 epinephrine.
  - First premolar / first molar.

Table IV. Percentages and number of patients who achieved anesthetic success with maxillary buccal infiltration using articaine and lidocaine solutions for first premolar and first molar

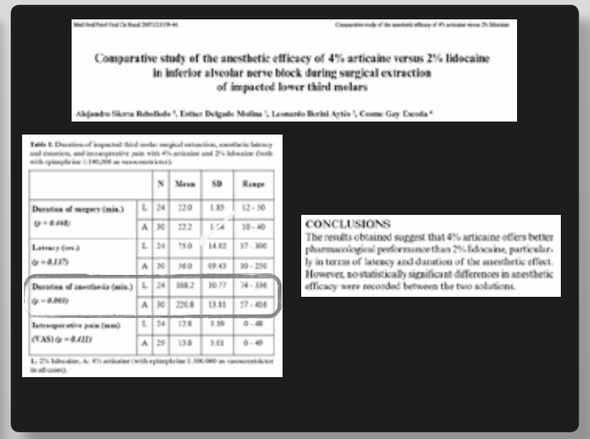
	4% Articaine	2% Lidocaine	*P* value *One-way ANOVA*
First premolar	100% (10 of 10) Group I	80% (8 of 10) Group III	.641
First molar	100% (10 of 10) Group II	30% (3 of 10) Group IV	.001*

*There was high significant difference between articaine and lidocaine solution.

Srinivasan N, Kavitha M, Loganathan CS, Padmini G. Comparison of anesthetic effect of 4% articaine and 2% lidocaine for maxillary buccal infiltration in patients with irreversible pulpitis. Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2009;107:133-6.

Inferior Alveolar Nerve block

Montjüic, Barcelona, Spain



Comparative study of the anesthetic efficacy of 4% articaine versus 2% lidocaine in inferior alveolar nerve block during surgical extraction of impacted lower third molars

Alejandro Sikora Rebolledo [a], Esther Delgado Molina [b], Leonardo Berini Aytés [c], Cosme Gay Escoda [d]

Table 1. Duration of impacted third molar surgical extraction, anesthetic latency and duration, and intraoperative pain with 4% articaine and 2% lidocaine (both with epinephrine 1:100,000 as vasoconstrictor).

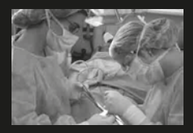
		N	Mean	SD	Range
Duration of surgery (min.) ($p = 0.468$)	L	24	22.0	1.85	12 - 50
	A	30	22.2	1.54	10 - 40
Latency (sec.) ($p = 0.137$)	L	24	75.0	14.82	37 - 300
	A	30	36.0	09.43	30 - 250
Duration of anesthesia (min.) ($p = 0.001$)	L	24	168.2	10.77	74 - 336
	A	30	226.8	13.81	57 - 404
Intraoperative pain (mm) (VAS) ($p = 0.411$)	L	24	13.8	3.39	0 - 48
	A	29	13.8	3.01	0 - 49

L: 2% lidocaine, A: 4% articaine (with epinephrine 1:100,000 as vasoconstrictor in all cases).

CONCLUSIONS
The results obtained suggest that 4% articaine offers better pharmacological performance than 2% lidocaine, particularly in terms of latency and duration of the anesthetic effect. However, no statistically significant differences in anesthetic efficacy were recorded between the two solutions.

Inferior alveolar nerve block

- Prospective, ramdomized, double blind.
- Crossover design.
- 57 patients.
- Lidocaine Vs. Articaine:
  - 1:100 000 epinephrine.
  - Inferior alveolar nerve block.
  - 1.8ml of solution.



Mikesell P, Nusstein J, Reader A, Beck M, Weaver J. A comparison of articaine and lidocaine for inferior alveolar nerve blocks. J Endod. 2005;31:265-70.

A Comparison of Articaine and Lidocaine for Inferior Alveolar Nerve Blocks

TABLE 2 Percentages and number of subjects who experienced anesthetic success, anesthetic failure and slow onset of anesthesia

	Anesthetic Solution	
	Articaine*	Lidocaine*
Anesthetic Success		
Second Molar	54% (30/56)	48% (27/56)
First Molar	40% (23/57)	32% (18/57)
Second Premolar	47% (26/55)	29% (16/55)
First Premolar	54% (28/52)	42% (22/52)
Lateral	16% (9/57)	14% (8/57)
Central	4% (2/57)	2% (1/57)
Anesthetic Failure		
Second Molar	7% (4/56)	9% (5/56)
First Molar	18% (10/57)	19% (11/57)
Second Premolar	20% (11/55)	27% (15/55)
First Premolar	19% (10/52)	23% (12/52)
Lateral	44% (25/57)	51% (29/57)
Central	72% (41/57)	75% (43/57)
Slow Onset of Anesthesia		
Second Molar	11% (6/56)	14% (8/56)
First Molar	12% (7/57)	19% (11/57)
Second Premolar	20% (11/55)	16% (9/55)
First Premolar	21% (11/52)	23% (12/52)
Lateral	28% (16/57)	19% (11/57)
Central	21% (12/57)	16% (9/57)

"...articaine and lidocaine would be similar in the incidence of postinjection sequelae."

"We concluded that 4% articaine with 1:100 000 epinephrine was similar to 2% lidocaine with 1:100 000 epinephrine in inferior alveolar nerve blocks."

Continues on page 29.

TePe Interdental Gel

– powerful caries prevention

TePe's fluoride gel is specially developed for caries protection of the approximal surfaces. The smooth formula facilitates application with an interdental brush, enabling efficient cleaning and fluoride distribution in areas with an increased caries risk. Fluoride is also known to alleviate tooth sensitivity.

- **0.32% Sodium Fluoride (1500 ppm)**
- **Contains no abrasives**
- **Fresh mint flavour**

TePe Interdental Gel with Fluoride is developed in collaboration with the Department of Cariology, Sahlgrenska Academy, University of Gothenburg, Sweden. It is recommended for everyone and particularly for persons with enhanced caries risk:

- **High caries activity**
- **Crowns or bridges**
- **Approximal fillings**
- **Exposed root surfaces, e.g., furcations**
- **Dry mouth**
- **Orthodontic Care**

An interdental brush dipped in fluoride gel has proven to be a more effective method of approximal fluoride distribution than other comparable methods.

Särner B, et al.
Approximal fluoride concentration using different fluoridated products alone or in combination.
Caries Res 2008;42:73–78.

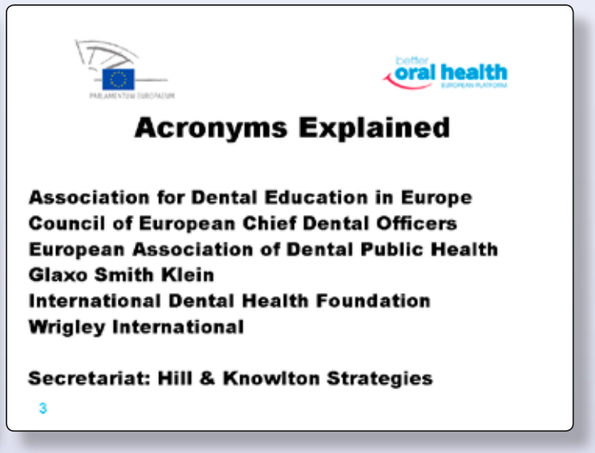
Särner B, et al.
Fluoride release from NaF- and AmF-impregnated toothpicks and dental flosses in vitro and in vivo.
Acta Odontol Scand 2003;61:289–296.

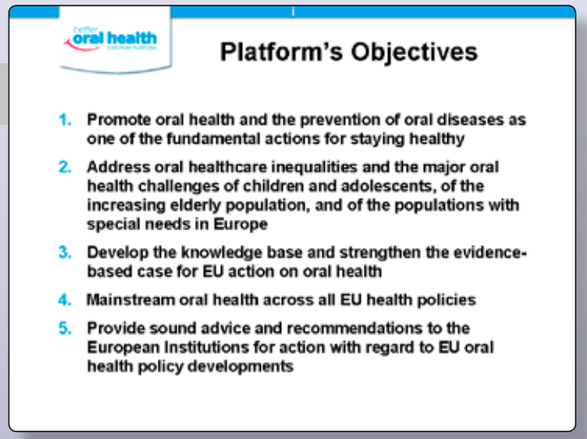
TePe We care for healthy smiles

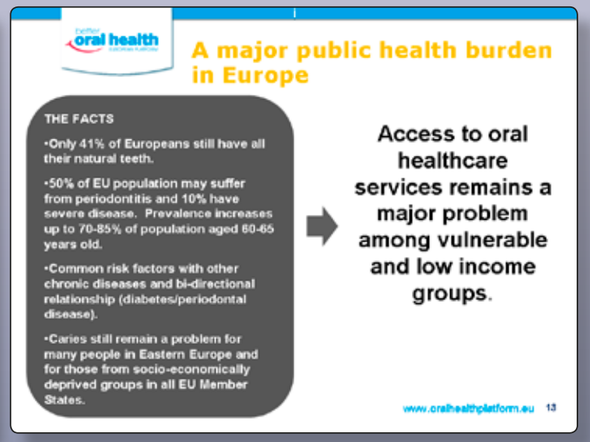
alfred gera & sons LTD

THE STATE OF ORAL HEALTH IN EUROPE
AND TARGETS TO IMPROVE IT

By Paul Boom, Platform for Better Oral Health in Europe







Continues on page 18.

Universal and cost-efficient

Ivoclar Vivadent has launched Adhese Universal, a new single-component, light-cured universal adhesive for direct and indirect bonding procedures. Adhese Universal features compatibility with all etching techniques: self-etch, selective-enamel-etch and total-etch. The VivaPen delivery form ensures fast and convenient application of the adhesive directly in the patient's mouth.

The universally applicable Adhese Universal establishes a strong bond to various types of dental restoratives. Therefore, it can be used for direct and indirect bonding procedures. The material's low film thickness minimizes the risk of fitting inaccuracies after cementation. No dual-cure activator is required for the cementation of indirect restorations.

The new single-component, light-cured Adhese Universal from Ivoclar Vivadent

EFFICIENT DELIVERY
The simple "Click" activation of the VivaPen delivery form allows the exact amount of material to be dispensed for each procedure. Dispensing of adhesive material into a dish before the application is not required. Thus residual material waste is considerably reduced. The VivaPen contains 2 ml of adhesive, which is sufficient for approx. 190 single-tooth applications. Compared to conventional bottle delivery forms, this amounts to almost 3 times more applications per millilitre (Source: Berndt & Partner, VivaPen Benchmarking Study, August 2013). Adhese Universal is available both in the VivaPen and the conventional bottle delivery form.

COMPATIBILITY WITH ALL ETCHING TECHNIQUES
Adhese Universal combines hydrophilic and hydrophobic properties. It is tolerant to moisture and penetrates well into the dentinal tubules. Since Adhese Universal is moderately acidic, it is compatible with any etching technique (self-etch, selective-enamel-etch or total-etch) and ensures an optimum bond between the tooth structure and the dental restorative.

PREDICTABLE RESULTS
Adhese Universal is technique tolerant and forgiving. It forms a stable, homogenous layer that is not sensitive to any application technique. Consistently high bond strengths on enamel and dentin are achieved irrespective of the etching protocol employed, using only a single layer of adhesive. The acetone-free, hydrophilic solvent contained in Adhese Universal ensures optimum wetting of the dentin and enamel. This results in enhanced infiltration and optimum sealing of the dentinal tubules to prevent microleakage and the associated postoperative sensitivity.

Adhese® is a registered trademark of Ivoclar Vivadent AG.

For further information, please contact:
Ivoclar Vivadent AG
Bendererstr. 2
9494 Schaan
Principality of Liechtenstein
Tel.: +423 235 35 35
Fax: +423 235 33 60
E-Mail: info@ivoclarvivadent.com
www.ivoclarvivadent.com

PAYMENT FORM

Please cut out this section and send with a cheque for 50 euro payable to **Dental Association of Malta** for your 2014 DAM membership – the best 50 euro investment ever!

TO:

The Treasurer, Dr Noel Manche,
The Dental Association Of Malta,
Federation Of Professional Associations,
Sliema Road,
Gzira.

NAME: _____

ADDRESS: _____

_____

_____

THE STATE OF ORAL HEALTH IN EUROPE
AND TARGETS TO IMPROVE IT

Continues from page 15.

Economic impact

THE FACTS

- The EU 27 spent an estimated 79 billion EUR on oral health in 2012 and will spend around 93 billion EUR by 2020.
- Much of the burden in high-income countries is due to caries and its complications.
- Expenditure on treatment of oral conditions often exceeds that of cancer, heart disease, stroke and dementia
- Delivering oral health services accounted for 5% of total health expenditure and 16% of private health expenditure in OECD countries in 2009.

→ Lack of data and challenge in estimating the expenditure on the provision of oral healthcare and in quantifying out-of-pocket and indirect costs

www.oralhealthplatform.eu 14

Understanding the problems

THE FACTS

- Current negative trends in periodontal health and oral cancer
- Increasing oral health inequalities
- Lack of integration of oral health into national or community health programmes
- Lack of research in oral health promotion
- Scarce best practice principals in prevention & oral health promotion
- Limited and fragmented data and knowledge base
- Dental workforce limitations

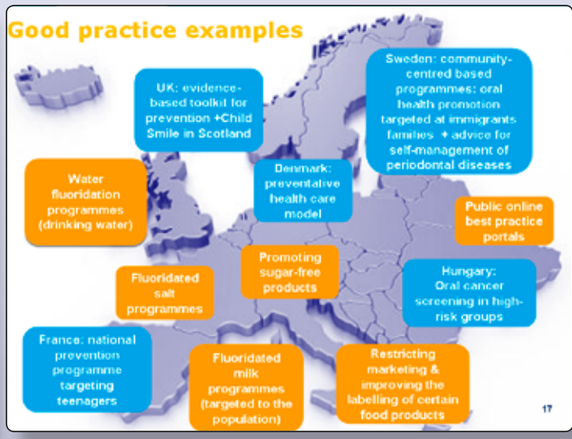
→ Lack of policy emphasis placed on oral diseases' prevention, partly due to the lack of available and comparable epidemiological & economic data.

www.oralhealthplatform.eu 16

5 key policy recommendations

1. Develop a **coherent European strategy** to improve oral health with commitments to **quantifiable targets by 2020**
2. Improve the **data and knowledge base** by developing **common methodologies** and bridging the research gap in oral health promotion
3. Support the development of **cross-sectoral approaches** with health and social care professions and support the development of the **dental workforce**
4. Address **increasing oral health inequalities** and **knowledge of prevention/oral hygiene practices** of the public and guarantee availability and access to high quality and affordable oral health care
5. Encourage **best practice sharing** across countries

Good practice examples



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World Oral Health Day 2013

In Teeth We Trust! Targets for better oral health by 2020

5th March 2013

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WHY THESE TARGETS? (1)

- Oral health-related costs are still on the rise despite the fact that oral diseases are highly preventable
- Current spending in dental treatment in the EU-27 was estimated to be close to 79 billion EUR in 2012
- The current oral health workforce in the EU is over 1 million and includes over 390,000 dentists and over 400,000 dental chair-side assistants (nurses)

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WHY THESE TARGETS? (2)

- Despite significant achievements in the prevention of caries, this disease remains a problem in particular for many groups of people in Eastern Europe and in socio-economically deprived groups in all EU Member States;
- Trends in the prevalence of gum disease and oral cancer across Europe are also worrying;
- The evidence-base available for decisionaking on oral health-related matters remains very poor.

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BETTER DATA COLLECTION SYSTEMS

1. Create an EU-funded, permanent European oral health surveillance and data collection network
2. All EU Member States to report oral health data based on the same methodologies and systems
3. EU-funded bridging of the oral health data gap

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PREVENTIVE POLICIES (1)

4. All population groups have access to OC based on needs.
5. All Member States develop a national oral health prevention strategy based on EU guidelines.
6. All Member States develop health promotion programmes to address OH inequalities.
7. The Platform has a permanent European coordination mechanism in place.

Confidential. For your information only

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PREVENTIVE POLICIES (2)

8. Each EU Member State should develop the appropriate mix of skills in their oral health team based on an EU health workforce plan.
9. Each EU Member State recognises the role of oral health clinicians in prevention and general health.
10. Each EU Member State integrates oral health in national curricula and CPD for all healthcare practitioners.
11. Carers for the elderly/orphan and special needs children routinely provide daily oral hygiene for those in their care.

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EDUCATION AND AWARENESS

12. EU Member States teach healthy habits and good oral hygiene practices to children and teenagers from an early age in schools.
13. All universities/dental schools in Europe integrate "prevention and health promotion" in their curricula.
14. All EU Member States have national prevention campaigns in place to raise citizens' awareness of oral health and promote good prevention habits and tobacco cessation.

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NEXT STEPS

- Run a pan-European stakeholder consultation in 2013 and call for inputs on the 2020 targets
- Gather existing data and assess gaps to establish a baseline for Member States and measure progress up until 2020
- Publish the results of the consultation & present the final targets at World Oral Health Day 2014
- Provide European policymakers with evidence-based examples of good practices
- Discuss implementation with the European Commission and Member States as part of the chronic disease joint action

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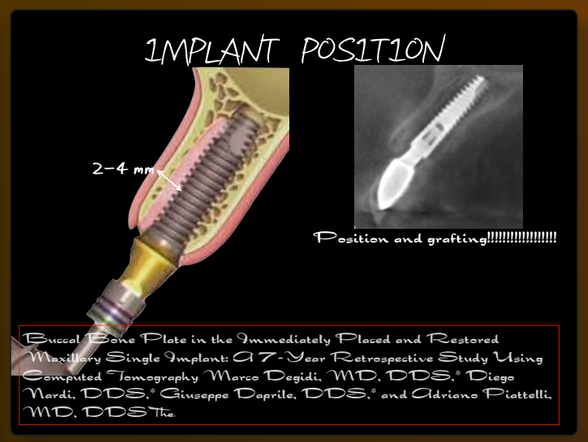
BONE MANAGEMENT

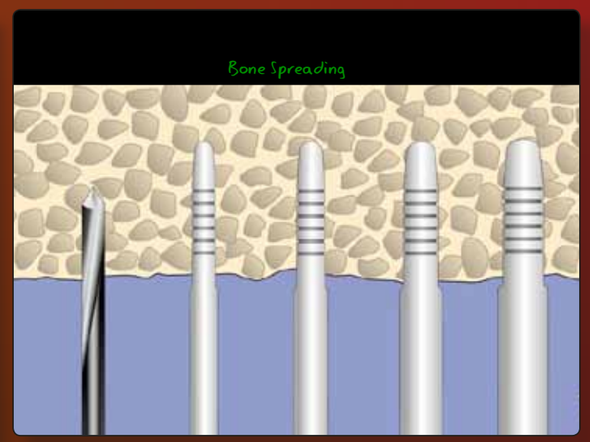
By Henriette Lerner DMD

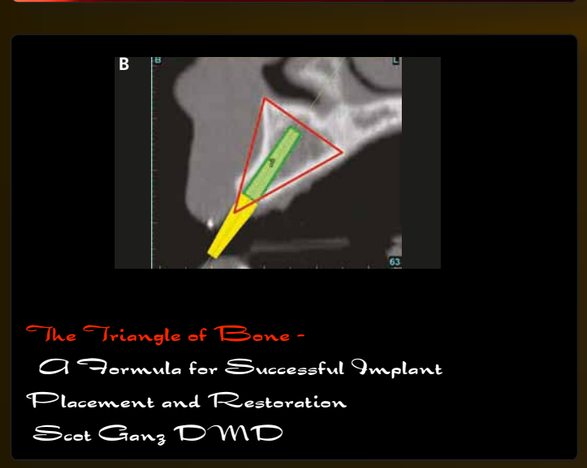
Dr. medic. stom. Henriette Lerner (DDS)
Associated Prof. Univ."Gr. T Popa" Iasi
Private Practice, Baden Baden Germany
Speciality:Implantology, Periodontology and Aesthetic Dentistry
ICOI Diplomate
DGOI Expert
BDO Member
ASA Member
DGÄZ Member
DGZMK Member
National and international lecturer on topics of:
Aesthetic dentistry ,Sinus elevation, Bone Grafting

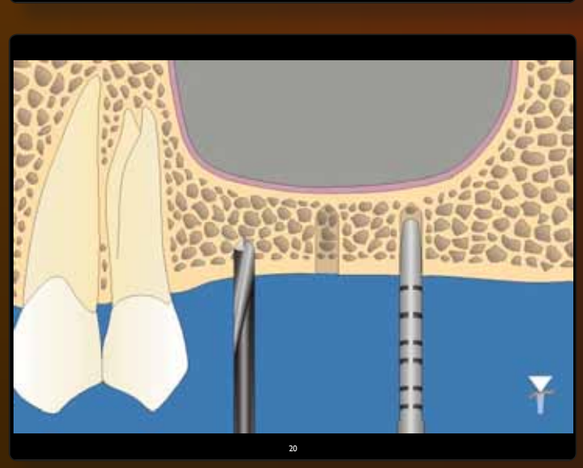


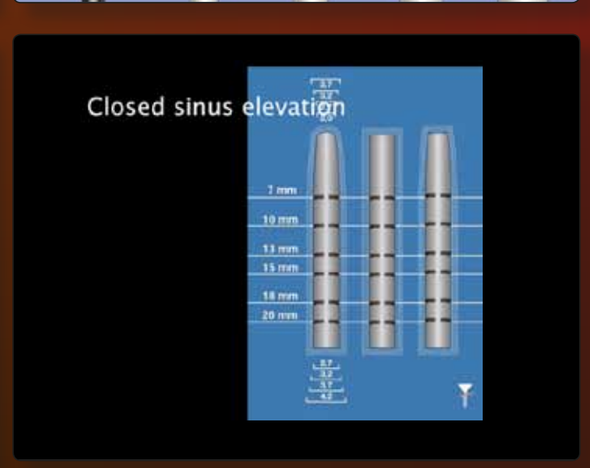
Standard method (drilling)		Bone spreading procedures	
Pilot drill	Ø 2,0 mm	Pilotbohrung	Ø 2,0 mm
Drill	Ø 2,5 mm	Osteotome 1:	2,0-2,7 mm
Drill	Ø 3,2 mm	Osteotome 2:	2,7-3,2 mm
Drill	Ø 3,7 mm	Osteotome 3:	3,2-3,7 mm
		Osteotome 4:	3,7-4,2 mm
		Osteotome 5:	4,2-5,0 mm
Healing period: 6-8 months		Healing period: 4 months	

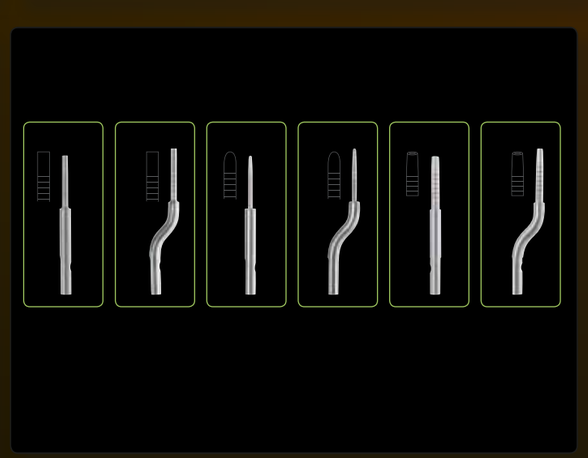
- *2mm drill*
- *0,5 mm diam osteotomes*
- *30-60 sec.*
- *Last 2-3 minutes*

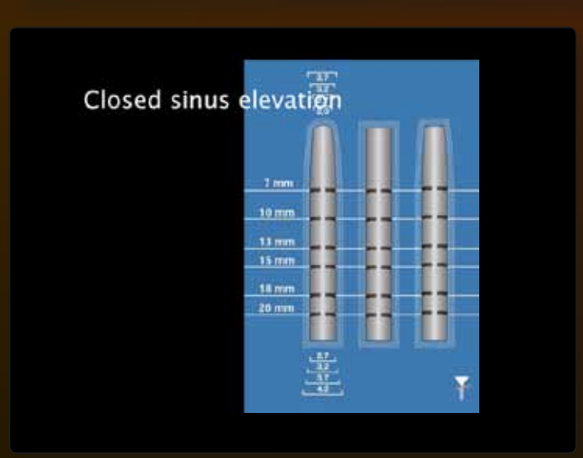












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BONE MANAGEMENT

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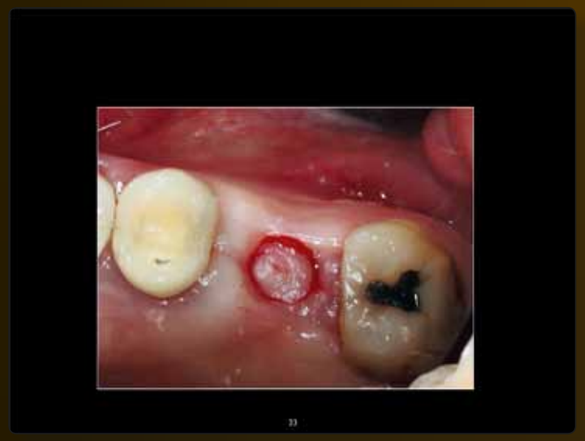

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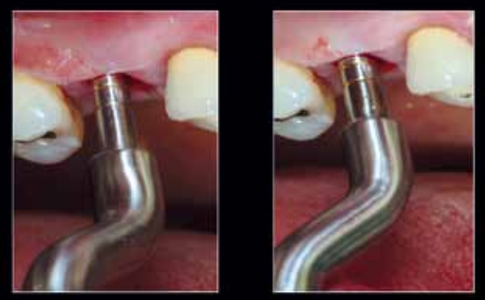

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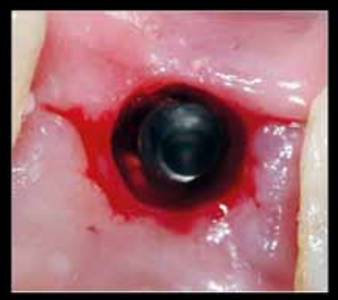

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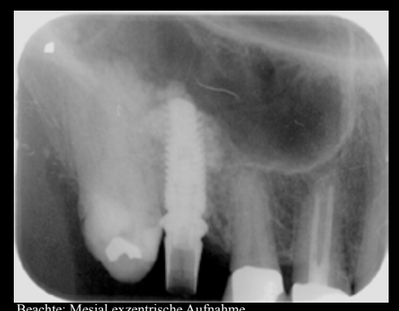

Beachte: Mesial exzentrische Aufnahme

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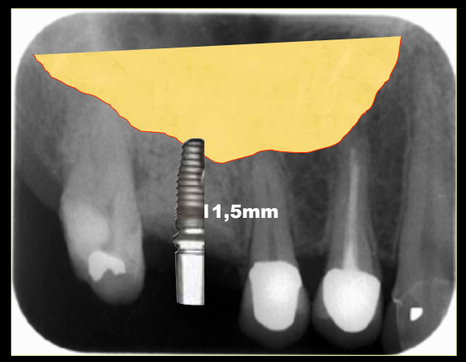
Continues on page 24.

BONE MANAGEMENT

Continues from page 23.



1. Greater bone density
2. Possible in patients with maxillary sinusitis
3. Shorter healing time
4. Lower material costs (drills, membranes, augmentation material)
5. Faster prosthetic restoration

DYING FOR A DRINK

HOW ALCOHOL BATTERS THE BODY

By Dr Charles Corney
MBBS DMRD FRCR
Medical Practitioner
and Researcher.

Alcohol stimulates the GABA neurotransmitters in the brain and therefore should be chemically regarded as a depressant. However alcohol does have excitatory features due to the release of inhibitions.

Alcohol in excess has many toxic effects on the body.
There has been confusion about the safe limits (measured in units) of alcohol. The UK Department of Health advises a maximum of 28 units per week for men and 21 units per week for women. However, the Royal College of Physicians advises 21 units and 14 units respectively.

We now know that alcohol is an important trigger for dose related breast cancer in women-the dose should be no more than 1 unit per day (7 units per week).
The present estimation is as follows:

1 spirit glass holds 75mls spirit =1 unit
1 small wine glass holds
175mls wine=2 units
1 large wine glass holds
250mls of wine =3 units
1 pint beer is 500mls beer=3 units
1 bottle 750mls wine =9 units

NB. In the past there was a smaller 125mls wine glass and therefore alcohol strength was weaker at only 1 unit.

Women have a lower threshold for alcohol side effects because they have less alcohol dehydrogenase enzyme present to break down the alcohol.

The result is women become drunk earlier and longer compared to men. Similarly, native Indian tribes in North America suffer the same intolerance, calling alcohol 'firewater'. Binge drinking has been defined where half the safe weekly quota of units is exceeded in one day.

CLINICAL FEATURES OF ALCOHOL TOXICITY

This condition often starts at a young age. If the patient continues to drink alcohol in excess through life, the toxic effects accumulate.

TEENS AND TWENTIES

'Ladette' drinking in females and 'Macho' drinking in males
The drinking occurs mainly in the pub or night clubs.

Continues on page 28.

PROFESSIONAL INDEMNITY INSURANCE FOR MEMBERS OF THE DENTISTS ASSOCIATION OF MALTA

Make Sure and Select an adequate Limit of Indemnity!

The Professional Indemnity Scheme Policy has what is known as the Limit of Indemnity. The Limit of Indemnity is the amount that the Insurers will pay in the event of a claim. You can choose from the following limits which are available under the scheme:

OPTION A **€50,000**
OPTION B **€75,000**
OPTION C **€100,000**
OPTION D **€125,000**
OPTION E **€150,000**
OPTION F **€175,000**
OPTION G **€250,000**
OPTION H **€300,000**
OPTION I **€500,000**

The limit of indemnity you choose should reflect your exposure to any potential claims under your Professional Indemnity Policy.

The scheme policy has what is known as an Aggregate Limit of Indemnity – this means that the total paid for all claims in an insurance year – including costs and expenses relating to the defence of claims, will be capped at the Limit of Indemnity chosen.

Therefore we strongly recommend that the Limit of Indemnity you choose is an adequate one and covers all your potential exposures.

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DYING FOR A DRINK

HOW ALCOHOL BATTERS THE BODY

Continues from page 25.

Hyperexcitability is the initial feature associated with a feeling of well being and euphoria, which is highly addictive. This toxicity may lead to 'yob' behaviour and violence indicating brain evolvement aggravated by the hypoglycaemic effects of the alcohol.

Gastric irritation, nausea and vomiting follows adding to the dehydrating effect of alcohol which accounts for subsequent headaches and depression. Some permanent memory and logic loss may be apparent on clinical testing with brain scanning revealing hippocampal shrinking.

THIRTIES AND FORTIES
Eg. bored housewives at lunchtime, travelling salesmen.
The consumption of about 1 bottle means the consumption of much carbohydrate which precipitates excessive insulin release and consequent fat deposition particularly around the abdomen al viscera.

This fat wraps itself around in the liver causing cirrhosis, seen on ultrasound as a grainy hyperdensity in a somewhat enlarged liver. This visceral deposition of fat secretes several hormones which have adverse effects on the body.
The first is an excessive secretion of oestrogen which unbalances the oestrogen-progesterone ratio risking the development of cancer of the breast, ovaries and endometrium. A vicious cycle of fat causing oestrogen release causing more fat deposition occurs and obesity follows.
This imbalance also causes infertility in both sexes.

Drinking during pregnancy risks a congenital birth defect of the child. Another hormone causes high blood pressure and cardiovascular disease and yet another produces abnormal cholesterol levels, diabetes type 11 and cardiovascular disease.

The skin and hair are dry from the diuretic/dehydration effect of the alcohol. Alcohol dilates blood vessels accounting for a permanent malar flush, spider naevi and bloodshot eyes.

FIFTIES AND SIXTIES
ie. Lifetime heavy drinkers
There is now considerable liver enlargement in a further attempt to break down the excess alcohol. The spleen often enlarges indicating blockage of blood flow through the portal vein due to cirrhosis, compressing it. This is known as portal hypertension.

Alcohol can also cause damage to the digestive system, increasing the risk of mouth, throat, oesophageal, gastric and colonic cancers.

Eventually the liver shrinks with the onset of jaundice, indicating liver failure. The patient loses weight as the gastritis prevents him from eating well. He suffers from consequent vitamin deficiency, particularly vitamin B affecting the brain causing behavioral problems and dementia.

Alcohol per se causes dementia with a tenfold risk of stroke and intracranial haemorrhage from falls. Fractures are common. The brain is now used to alcohol so that missing a regular drink leads to an acute withdrawal symptom of delirium tremens where the patient is hyper excitable with hallucinations.

Inflammation of the heart muscle (cardiomyopathy) is common causing arrhythmia and palpitations.

CONCLUSION
Alcohol toxicity is a worldwide problem leading to considerable morbidity and mortality at a younger age.

HOW CAN **ARTICAINE** IMPROVE MY DAILY CLINICAL PRACTICE?

Continues from page 12.

Matthews R, Drum M, Reader A, Nusstein J, Beck M. Articaine for supplemental buccal mandibular infiltration anesthesia in patients with ireeversible pulpitis when the inferior alveolar block fails. J Endod. 2009;35:343-6.

- IAN block with lidocaine 2% + epinephrine 1:100 000.
  - 27 patients successful.
  - 55 patients:
    - Moderate/severe pain (VAS > 55mm).
    - Supplemental infiltration of articaine 4% with epinephrine 1:100 000.

TABLE 1. Percentages and Number of Subjects Who Experienced Anesthetic Success with the Supplemental Buccal Infiltration of Articaine

Tooth	Anesthetic success	95% Confidence interval
First molar	58% (15/26)	37%–77%
Second molar	48% (11/23)	27%–69%
Second premolar	100% (3/3)	29%–100%
First premolar	100% (3/3)	29%–100%
Total	58% (32/55)	44%–71%

* = 95

Hospital de Sant Pau, Barcelona, Spain

Lidocaine Vs Articaine

- Meta-analysis (2010).
  - 9 studies included.
- Articaine is a superior anesthetic to lidocaine for use in routine dental procedures.
- Similar adverse effects.
- Use in children under 4 years of age is not recommended (no data available).

Katyal V. The efficacy and safety of articaine versus lignocaine in dental treatments: A meta-analysis. J Dent. 2010;38:307-17.

Barceloneta, Barcelona, Spain

Adverse effects

- Toxicity: 0.6 (lidocaine 1.0).
- Alergic reactions:
  - Generally related to the excipients.
  - Artinibsa:
    - PABA free.
    - No EDTA.

Adverse effects

- Pain on injection.
- Trismus.
- Hematoma.
- Edema.
- Facial nerve palsy.
- IAN and LN injuries.
- Systemic complications:
  - Methemoglobinemia.
  - Allergic reactions.

Continues on page 30.

HOW CAN **ARTICAINE** IMPROVE MY DAILY CLINICAL PRACTICE?

Continues from page 29.

Harboe T, Guttormsen AB, Aarebrot S, Dybendal T, Irgens A, Florvaag E. Suspected allergy to local anaesthetics: follow-up in 135 cases. Acta Anaesthesiol Scand. 2010;54:536-42.

- 135 cases (1995-2006).
- Section for Clinical Allergology.
- 61 cases after dental anesthesia.
- Chlorhexidine and latex.

"The present study supports that only a small fraction of cases examined for suspected allergy are actual cases of local anesthetics hypersensitivity, but it also observed that a notable number of such patients actually suffered reactions towards other allergens."

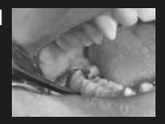
Pediatric patients

- Double-blind, ramdomized, multicenter trial.
- Patients age: 4 to 13 years old.
- Evaluation was made by patients and dentists.
- Articaine 4% Vs. Lidocaine 2%:
  - Epinephrine 1:100 000.

Malamed SF, Gagnon S, LeBlanc D. A comparison between Articaine HCl and Lidocaine HCl in pediatric dental patients. Pediatric Dent 2000;4:307-11.

A comparison between Articaine HCl and Lidocaine HCl in pediatric dental patients

- In simple procedures the efficacy was very similar.
- In complex procedures articaine showed better outcomes in pain control.



- Dosage!
- Adverse effects reported:
  - 8% in the articaine group.
  - 10% in the lidocaine group.

"Articaine 4% with epinephrine 1:100 000 is a *safe* and *effective* local anesthetic for use in pediatric dentistry."

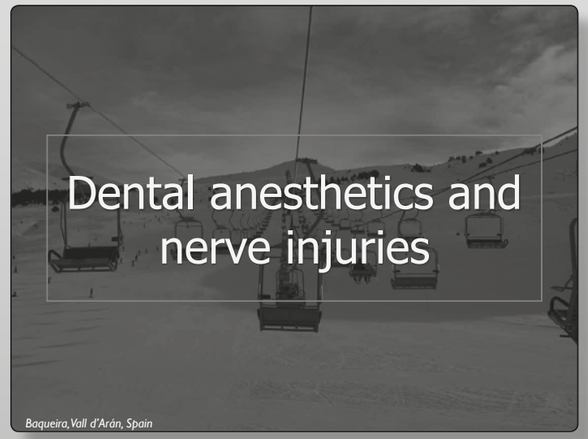
Safety

- Double-blind, ramdomized, multicenter trial.
- 27 centers involved (US and Europe).
- Articaine 4% (n=882) Vs. Lidocaine 2% (n=443):
  - Epinephrine 1:100 000.

Malamed SF, Gagnon S, LeBlanc D. Articaine hydrochloride: a study of the safety of a new amide local anesthetic. J Am Dent Assoc 2001;132:177-85.

Malamed SF, Gagnon S, LeBlanc D. Articaine hydrochloride: a study of the safety of a new amide local anesthetic. J Am Dent Assoc 2001;132:177-85.

Adverse Event	Tretment Group	
	Articaine	Lidocaine
Edema	1%	1%
Headache	4%	3%
Infection	1%	<1%
Pain	13%	12%
Gingivitis	1%	1%
Hyperthesia	<1%	1%
Paresthesia	0,9%	0,5%



Nerve injuries

- During IAN blocks:
  - Anatomical proximity.
  - Needle or anethestic solution?
  - Positive blood aspiration (8.9%).

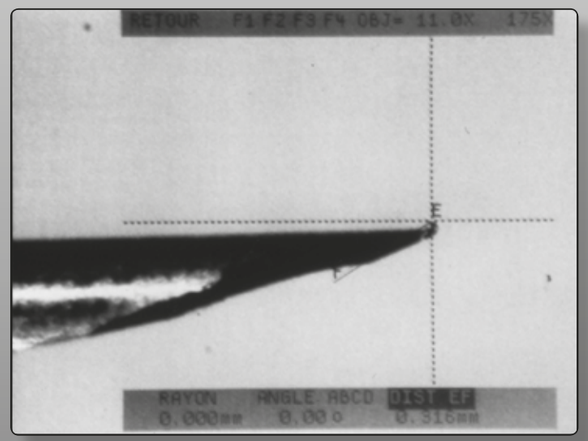
Delgado-Molina E, Bueno-Lafuente S, Berini-Aytés L, Gay-Escoda C. Comparative study of different syringes in positive aspiration during inferior alveolar nerve block. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 1999;88:557-60

Malamed SF, Gagnon S, LeBlanc D. Articaine hydrochloride: a study of the safety of a new amide local anesthetic. J Am Dent Assoc 2001;132:177-85.

"Articaine 4% with epinephrine 1:100 000 is a *safe* local anesthetic for use in clinical dentistry."

"Dentistry's clinical experience with articaine/epinephrine formulations through the years supports the assertion that the risk of systemic toxicity with articaine is low."

"Articaine is well-established in clinical dental practice in continental Europe and Canada, with more than 100 million cartridges sold."



Nerve injuries

- Several reports have expressed concerns relating Articaine with nerve injuries:
  - 4% solution.
  - Articaine and prilocaine more than 60% of cases.
  - Incidence: 1:785.000.
  - In 1993: 14 cases out of 11.000.000 injections.
  - LN impairment risk was 2-fold IAN lesions.

Haas DA, Lennon D. A 21 year retrospective study of reports of paresthesia following local anesthetic administration. J Can Dent Assoc. 1995;61:319-30.

Continues on page 32.

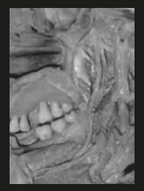
HOW CAN **ARTICAINE** IMPROVE MY DAILY CLINICAL PRACTICE?

Continues from page 31.

PERMANENT NERVE INVOLVEMENT RESULTING FROM INFERIOR ALVEOLAR NERVE BLOCKS

M. ANTHONY POGREL, D.D.S., M.D., F.A.C.S., F.R.C.S., SRI THAMBY, B.D.S., M.D.SC., F.R.A.C.D.S.

- 83 patients (included surgical cases).
  - 79% lingual nerve lesion.
  - 57% felt pain or electric shock.
  - 36% dysesthesia.
- Incidence from 1:26,762 to 1:160,571.
- Prilocaine was the most frequently used anesthetic.



Pogrel MA, Thamby S. Permanent nerve involvement resulting from inferior alveolar nerve block. J Am Dent Assoc. 2000;131:901-7.

Occurrence of paresthesia after dental local anesthetic administration in the United States

Gabriella A. Garisto, DDS; Andrew S. Gaffen, DDS; Nereida P. Lawrence, DDS, MSc, PhD; Howard C. Tenenbaum, DDS, PhD; Daniel A. Haas, DDS, PhD

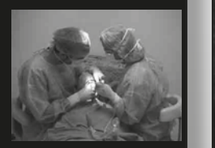
- Survey: 1997 to 2008.
- FDA's Adverse Event Reporting System.
- 248 cases.
- Lingual nerve was affect in 89% of cases.
- Prilocaine (RR=7.3) and articaine (RR=3.6).

"The findings of our study confirm that paresthesia arising from a local anesthetic injection alone is a *rare event*."

"...4% anesthetic solution...prilocaine and articaine, are more highly associated with the development of paresthesia..,"

Critical appraisal

- Study limitation:
  - Based on the report of adverse effects.
  - Incidence: 20 cases/year in the US.
- Our data:
  - 4995 3M extractions with 4% articaine.
    - 0.5% of Lingual Nerve injuries.
    - 1.1% of Inferior Alveolar Nerve injuries.



Queral-Godoy E, Figueiredo R, Valmaseda-Castellón E, Berini-Aytés L, Gay-Escoda C. Frequency and evolution of lingual nerve lesions following lower third molar extraction. J Oral Maxillofac Surg. 2006;64:402-7.

Queral-Godoy E, Valmaseda-Castellón E, Berini-Aytés L, Gay-Escoda C. Incidence and evolution of inferior alveolar nerve lesions following lower third molar extraction. Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2005;99:259-64.

Conclusions

"4% Articaine with epinephrine 1:100 000 is a *safe and extremelly effective* local anesthetic."

"The presentation of 4% Articaine with epinephrine 1:200 000 represents an excelent option in patients who can not tolerate normal doses of vasoconstrictor."

"Articaine has a high quality level of scientific evidence and is well-established in clinical dental practice in Europe and in the US."

"Artinibsa offers all these advantages along with the correct excipients and the guarantee of an experienced european dental anesthetics manufacturer (1948)."

CED ACTIVITIES INFO

Issue 2 – March 2014

COUNCIL OF EUROPEAN DENTISTS

CED ACTIVITIES
CED PRESIDENT

PLATFORM FOR BETTER ORAL HEALTH EVENT

On 18 March, CED President Dr Wolfgang Doneus travelled to Brussels to attend a roundtable event organised by the Platform for Better Oral Health in Europe. The event was hosted by MEPs Karin Kadenbach and Claudiu Ciprian Tănăsescu in the European Parliament. The purpose of the event was to launch the European Oral Health Report Card outlining the extent of effectiveness of oral health disease prevention in EU Member States.

CED BOARD MEETING ON 13–14 MARCH

Members of the Board:
Dr. Landi, Dr. L'Herron, Dr. Sanderson, Dr. Tolmeijer, Dr. Doneus, Prof. Dr. Sharkov, Dr. Grönroos and Dr. Engel.

On 14 March, the CED Board of Directors met in Brussels for its regular quarterly meeting. During the meeting, the Board members reviewed CED political activities since their November meeting and discussed current political developments related to the modernised Professional Qualifications Directive (PQD), Medical Devices Regulation and the General Data Protection Regulation.

The Board also discussed issues in relation to e-Health, patient safety, liberal professions and CED communications activities.

The Board agreed on the text of the CED Manifesto for the 2014 European Elections and approved a number of initiatives by CED working bodies in preparation of the May General Meeting in Athens, such as the draft CED resolutions on online evaluations of dntists and on vocational training.

CED WORKING GROUPS (WG)
WG AMALGAM AND OTHER RESTORATIVE MATERIALS

On 14 March, the European Commission published the final opinion on 'Environmental risks and indirect health effects from use of dental amalgam (update 2014)' of the Scientific Committee on Health and Environmental Risks (SCHER).

SCHER agreed in its final opinion with the CED conclusions on alternative materials (see p. 23 of the final opinion).

On the basis of the opinion, the Commission updated its factsheet on dental amalgam. On 29 January, the European Commission launched a public consultation on the preliminary opinion on the 'safety of the use of bisphenol A in medical devices'.

WG Amalgam and WG Medical Devices analyzed preliminary opinion drafted by the Scientific Committee on Emerging Newly Identified Health Risks (SCENIHR) and prepared a CED response to the consultation which was open until 26 March.

WG EDUCATION AND PROFESSIONAL QUALIFICATIONS

WG Education and Professional Qualifications held an online meeting on 7 February and discussed the first draft of the vocational training resolution, public consultation on a 'European Area of Skills and Qualifications', European Professional Card and the state of play of the CPD study in which the CED is involved.

On 12 February, CED Board liaisons Dr Marco Landi and Dr Peter Engel, CED Head of Office Nina Bernot and Policy Officer Sara Roda attended a conference on 'Modernisation of the PQD – Safe Mobility'.

The conference provided the opportunity to discuss the changes introduced by the modernized PQD and addressed the following issues:

i) facilitating mobility: the European Professional Card;
ii) reinforcing safeguards for citizens and patients: the alert mechanism and knowledge of languages;
iii) facilitating qualifications: recognition of traineeships and the importance of diversity in education systems; and
iv) simplification: common training principles.

WG met in Brussels on 26 March and focused on the draft CED resolution on vocational training. The WG meeting was followed by CED – ADEE Task Force meeting also took place on the same day during which the representatives of the two organisations discussed further cooperation.

WG EHEALTH

WG eHealth met online on 6 March to further discuss the draft resolution on online evaluations of dentists and the comments received from CED members. The draft resolution will be submitted to the CED General Meeting in May in Athens for adoption.

WG PATIENT SAFETY

On 14 February and 13 March, CED Policy Officer Aleksandra Sanak attended the meetings of the Commission-led Patient Safety and Quality of Care Working Group (PSQCWG). The participants discussed and finalised the reports of the subgroups on reporting and learning systems and on education and training of health professionals.

The European Commission presented the preliminary results of the questionnaire on patient safety and quality of care which had been addressed to Member States only and the results of the public consultation on patient safety and quality of care which was open until 28 February and to which CED WG Patient Safety prepared a reply on behalf of the CED. The reports of the subgroups as well as the final results of the questionnaire and of the public consultation will be integrated in the 2nd implementation report on the Council Recommendation 2009/C151/01 which will be published in May.

WG TOOTH WHITENING

On 17 February, WG Chair Dr Stefaan Hanson and CED Policy Officer Sara Roda met with the European Commission's relevant service to present the CED report on undesirable effects of tooth whitening or bleaching products.

The report is one of the deliverables of an agreement signed between the CED and the European Commission on 31 March 2010 to support the ongoing availability of tooth whitening products on EU market, to ensure that patients can only access appropriate treatment via trained and qualified dental professionals (i.e. dentists) and to reassure Member States that the occurrence of undesirable effects is followed by appropriate actions (e.g. the possibility of checking the products).

This first report covers the period from 31 October 2012 to 31 October 2013. The second report will cover the period from 1 November 2013 to 31 October 2014. The annual survey to report undesirable effects is available on CED website. During the meeting the following issues were also discussed:

i) implementation of Directive 2011/84/EU on tooth whitening products,
ii) concentrations of H2O2 higher than 6% to treat specific medical conditions,
iii) internal bleaching,
iv) use of H2O2 as coagulant, and
v) alternative materials.

CED BOARD TASK FORCES (BTF)
BTF INTERNAL MARKET

On 10 and 11 February, CED Policy Officer Sara Roda attended the WP 6 – Horizon Scanning – Workshop in London organised in the context of the Joint Action on EU Health Workforce Planning and Forecasting1 (JA 1 Funded by the Health Programme of the European Union. EUHWF).

The aims of the workshop were:

i) to validate the comparison of qualitative methods in health workforce planning based on information provided by JA partners and
ii) to train partners to conduct horizon scanning interviews with key stakeholders to enable the identification of drivers that may impact on the health workforce up to 2035.

Partners were requested to provide a list of experts to be interviewed and indicate if they wanted to participate in the ranking and mapping exercise of the key drivers that impact health workforce. The CED has expressed an interest to assist in all these activities.

The CED was invited to formally contribute to two other Work Packages of the JA EUHWF: WP 7 – Sustainability of results of the JA and WP 5 – Planning methodologies (quantitative planning) and is accordingly extending its contribution to the JA.

On 14 February, Sara Roda met with the European Commission's responsible services for the data protection and discussed the issues of concern for the dental profession in connection to the proposed General Data Protection Regulation.

The CED also sent, together with CPME and PGEU, a joint open letter to the Members of the European Parliament ahead of the plenary vote on the Regulation.

CED BRUSSELS OFFICE
CSD PRESS CONFERENCE

On 11 March, Aleksandra Sanak attended a press conference organised by Chambres Syndicales Dentaires (CSD) ahead of the World Oral Health Day 2014 on 20 March which focused on healthy smiles, promoting worldwide awareness of oral health and educating about the importance of maintaining good oral hygiene.

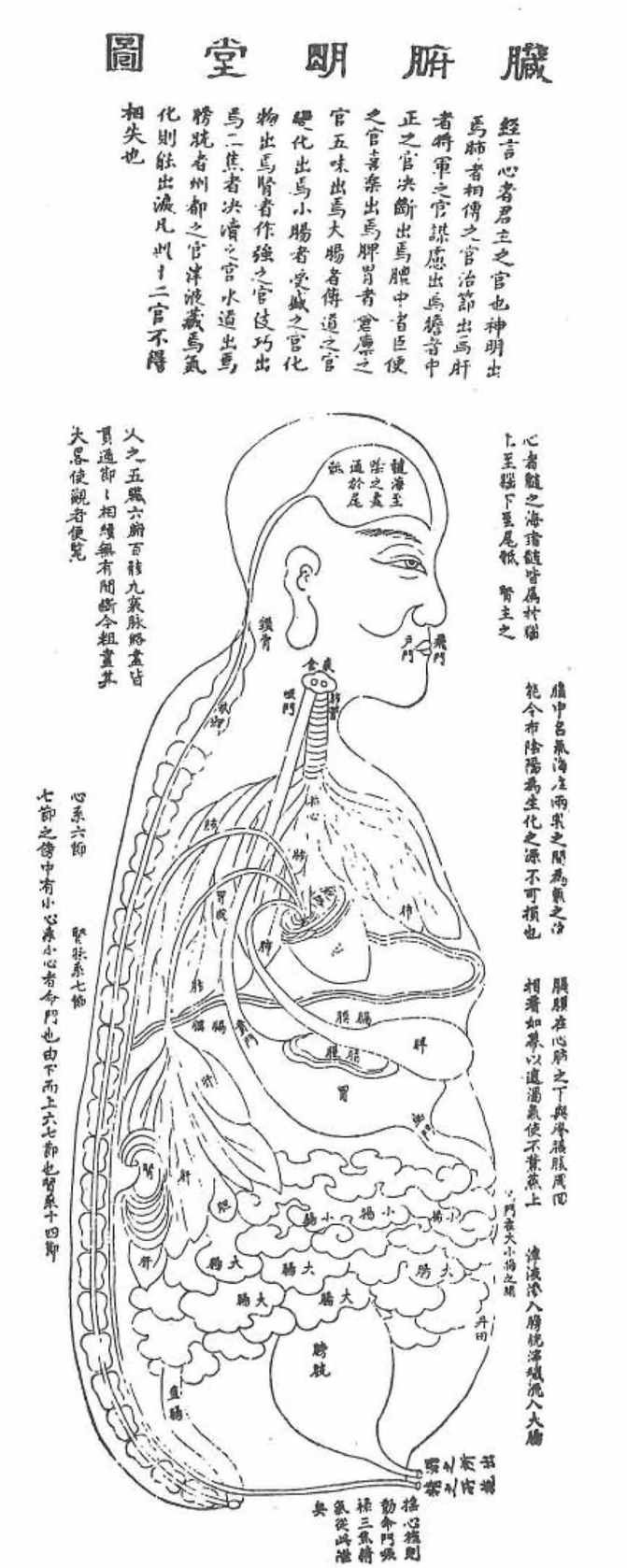
The CSD which targets the French-speaking public in Belgium organised a flash mob with the participation of students and dental trainees to raise awareness among individuals and public institutions in Belgium about the importance of fundamental measures to reduce and combat all forms of oral diseases.

DENTS SOIGNÉES, SANTÉ PRÉSERVÉE!

On 18 March, Aleksandra Sanak attended a symposium 'Dents soignées, santé préservée' organised by Mutalités Libres in Brussels.

Among the issues discussed were the influence of periodontal diseases on general health and dental insurance in Belgium.

If CED Members wish to receive further information about any of the items mentioned in the newsletter, please contact: ced@eudental.eu



MEDIE VAL ANATOMY
AN EASTE RN EXAMPLE

By Dr C. Corney, Medical Researcher

Whilst a medical student at the former Charing Cross Hospital near Trafalgar Square in London, I was fascinated by an ancient Chinese anatomical diagram of the viscera hanging on a wall of the consultants' room. This unsigned and indecipherable diagram was largely ignored. However, some research revealed quite a story attached to it.

I was lucky to find a Chinese doctor who could translate the captions on this diagram which were written in Classical Chinese denoting a period in history of the 1500s.

One of the Charing Cross Hospital consultants [Sir James Cantlie] started a medical school in Hong Kong in 1886. A Doctor Sun Yat Sen was its first medical graduate in 1892. At that time China was controlled by a powerful,scheming, old dowager empress from the Manchu Dynasty. As a consequence the whole country was in a state of unrest. Sun Yat Sen became the leader of a revolution in 1895, but his plot failed necessitatng fleeing China to London.Unfortunately the empress's agents were already in London. They seized Sun Yat Sen for immediate extradition [and certain execution] in China. Howvever, the timely intervention of Cantlie and the then prime minister [Lord Salisbury] prevented such an event. In 1911 Sun Yat Sen became leader of the Party of Reform and forced the Imperial Dynasty of China to voluntarily abdicate. A year later,Sun Yat Sen became the first president of South China. Sun Yat Sen was not a communist. If it had not been for Cantlie's intervention, Chinese communism, paradoxically,might never appeared to threaten the West. In gratitude, Dr Sun Yat Sen presented this ancient anatomical diagram to Charing Cross Hospital in the early 1900s.

So now we pass on to an analysis of the diagram .If we are right in thinking that this diagram and its captions reflect the Chinese knowledge of anatomy and physiology of 500 years ago, we may compare it with its contempoaries in the Western world

Leonardo da Vinci [1452-1510] springs to mind but one must concede not only his incomparably superior artistry but his more accurate morphology. Yet, perhaps this is unfair criticism, for this is a diagram with no attempt at verisimilitude. And there is a virtue in the diagramatic or the simple realistic approach to anatomical illustration. Vesalius [1514-1564],nearly a contempoprary,illustrated his studies with strict realism, which, if not to be matched in artistry with Leonardo's work, has been compared favourably with the over-elaborate and irrevalent discursiveness of the anatomical illustrations of his contemporary,Charles Etisune.

Our Chinese diagram distinguishes clearly at the upper level between the trachea,labelled "gas' and, lower pipe of the lung"--[the cartilagenous rings of the trachea are well shown] and the oesophagus [labelled "food' and 'opening for sucking"]. The oesophagus leads through the "noble"'or "honourable"'orifice to the stomach, which opens into the duodenum through the "gloomy"'orifice.

It will be noted that the kidney does not connect with the bladder, although the bladder has "an outlet of fluid". The tube leading downwards from the kidney is brought to the surface alongside the "outlet of fluid" and is labelled "outlet of essence" or sperm.

In the caption on the right of the diagram at the level of the thorax one reads "The centre of the thorax is called the "Sea of Gases," situated between the breasts. This can give rise to "Yin Yung." It is the source of life and must not be damaged. Yin Yung has three meanings -- 1 Darkness & Brightness, 2 Male & Female, 3 All things between two extremes in the Universe. No wonder the author feels that it must not be damaged.

The third caption on the right, just below the level of the diaphragm, tells us that "The diaphragm ,situated below the level of the heart and the lungs, has a close connection with the spinal cord. The ribs and abdomen act like a curtain to cut off the dirty gases so they are prevented from streaming upwards."

The caption written inside the head gives most of the physiological message of this diagram. It might be thought to describe the brain, but after reading the translation and noting the tube leading down the spinal column, I think this is intended to describe the cerebral ventricles with the central canal inferiorly. Anyhow, the writing says "The Sea of Marrow connecting to the Sex through the end vertebra." This idea of a "sea of marrow" added to the fact that the organ depicted does not fill the cranium suggests that this a crude depiction of the ventricular system. But the connection with sex is not obvious. Furthermore, and to add to our confusion, the topmost right-hand caption can be translated as "The heart is the sea of marrow. All marrow belongs to the brain, reaching up to the brain itself above, and extending below to the end of the spine. This is governed by the kidneys."

Here we seem to have the same confusion which arises in our own English nomenclature when we adapt the Greek Muelos, i.e Marrow, to mean the spinal cord [c.f.transverse myelitis] and the marrow of bones [c.f. osteomyelitis].

Most of the physiological message of this diagram is contained in the caption printed at the top and headed "A Clear Diagram of the Viscera" and reads thus:-

"The Classics tell us that

1. The heart is the Emperor's organ.
2. The lungs are the organs of transmission and function regulation.
3. The liver is an organ like a general who gives advice, plans and worries.
4. The gallbladder is the organ of judgement and decision.
5. The centre of the thorax is the administrator; happiness and sadness are derived from it.
6. The spleen and stomach are the organs to deal with food and storage. The five senses of taste are derived from these organs.
7. The large intestine is the organ of conveyance and of preaching and propaganda.
8. The small intestine causes food to change to other substances.
9. The kidneys are organs to produce strength and cleverness.

10 &11. The testes are to decide filling and waste, regulating waterwork.

12. The bladder is the organ of cities and towns where moisture and juices are stored. [The breaking of gas can cause tears.]"

The idea of strength lying in the kidneys is Biblical: "Examine me, O Lord, and prove me, try out my reins and my heart."--Psalms XXVI, 2.

Though much of the above physiology is incomprehensible to us, it is, in some respects, reminiscent of the Humoural Theory of Galen [130-200 AD].

There is no doubt that that both the Western and Eastern anatomists of the Middle Ages stimulated interested in "mapping" the body. However, there was one area that eluded them. This was the heart and circulation, but William Harvey [1578-1657] finally discovered the correct answer. Henry Gray [1827-1861] wrote a textbook [Grays Anatomy] of detailed normal anatomy as the result of his dissections of hundreds of cadavers.

So it seemed that anatomy was constant and immutable. But with the invention of living body scanning devices in the 1960s, we realised that normal anatomy was not always so constant. In particular, the abdominal viscera could alter position--depending on posture and the phase of respiration.

SOME RECENT REVELATIONS REGARDING SMOKING

By Dr Charles Corney MBBS DMRD FRCR
Medical Practitioner and Researcher

Sir Richard Doll, an eminent UK physician and epidemiologist first reported 50 years ago, the association between smoking and an increased incidence of chronic bronchitis, emphysema, lung cancer and heart disease.

He also observed that when one stopped smoking before the age of 40, more than 90% of the health risks associated with smoking were avoided and that the life span was not shortened.

He was a smoker himself who stopped at age 37 and lived a long, healthy life into his 80's-a good example of this observation indicating that the body had repaired any damage from smoking.

Nevertheless, despite Doll's pronouncements on the health risks of smoking, many young people still smoked, and still do, despite knowing that it may shorten their life by 15 years (or by 9 minutes with each cigarette).

Three young men who promoted a particular brand of cigarette in adverts all died prematurely. Young girls often smoked to keep down their weight after noting the anorexic effect of nicotine.

Since Doll's original pronouncements we have observed more recently many more associations

Cancer anywhere in the respiratory tract, digestive tract (especially oropharynx), urogenital tract(especially the cervix).

1. Cancer of the breast
2. Premature constricting arterial disease-femoral(gangrene, amputation),carotid(stroke) coronary (heart attack, arrhythmi a),testicular(impotence, infertility, libido loss),ovarian(premature menopause), arterioles, hypertension , lowering of HDL cholesterol and raising of LDL cholesterol
3. Nicotine dependence and addiction –nicotine increases nicotine receptors in the brain to new higher levels.
4. Collagen loss causes premature wrinkles which are unresponsive to Botox. Breasts sag as well as buttocks.
5. Placenta-underweight fetus. Prematurity and miscarriage.
6. Infection-loss of immunity, recurrent pneumonia, sepsis spread, heart disease
7. Optic-blindness from irreversible macular degeneration.

The Constituents of a Cigarette.
Several hundred chemicals are present. The tobacco plant contains nicotine which is highly addictive and causes atherosclerosis and hypertension. The plant growth is enhanced by an ammonia fertilizer (an upper respiratory irritant), an arsenic pesticide and a herbicide (can cause oestrogen domination in the endocrine system risking cancer).

Bronchodilating chemicals (ammonia, cocoa) are added to the cigarette to give an extra nicotine 'rush' to the brain, because the dose of nicotine is usually at the upper legal maximum. Sugar and menthol are added to improve the taste with N-nitrosamine to reduce the smoke.

The combination of all the above chemicals produces tar(causing dental sepsis) and smoke which is full of toxic and carcinogenic material such as carbon monoxide (causing atherosclerosis), benzene, aldehyde, cadmium (causing heavy metal poisoning), and radioactive polonium (causing generalized cell damage).

The Benefits of Stopping Smoking
This is the greatest single step that can be taken to improve health and life expectancy. Once the body intake of carbon monoxide and other poisonous chemicals stops, the body can begin to repair the damage.

TIME STOPPED / BENEFITS

1ST DAY:
Blood pressure and pulse normalize; oxygen replaces carbon dioxide.

2ND DAY:
Nicotine level is now zero.

3RD DAY:
Less breathless.

3-9 MONTHS:
Chest symptoms disappear. Now normal energy.

5 YEARS:
Heart attack risk drops by half that of a stroke.

10 YEARS:
Heart attack risk drops to that of a non-smoker. Lung cancer risk drops by half that of a non-smoker.

CONCLUSION
As health care professionals we can advise the patient on the dangers of smoking .The patient is entitled to freewill and choice. However the recent information of how smoking may affect the patients' looks and libido with blindness is compelling.

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G·U·M

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To successfully fight halitosis right at its root causes