TEXT 1: INSOLUBLE NaF IN DURAPHAT® MAY PROLONG FLUORIDE REACTIVITY OF VARNISH RETAINED ON DENTAL SURFACES
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There is no consensus about the clinical recommendation of the time that Duraphat® varnish should be maintained on enamel surfaces without suffering mechanical disturbance by the patient. Considering the importance of calcium fluoride (CaF$_2$)-like reservoirs on the anticaries effect of professional fluoride application, an in vitro study was designed to test the reactivity of Duraphat® varnish with enamel forming these reservoirs as a function of time. Since most fluoride in Duraphat® varnish is insoluble to react and form products on enamel, the relative contribution of the varnish soluble and insoluble fluoride fractions to the reactivity was also evaluated. For this, whole-varnish, containing soluble and insoluble fluoride (total fluoride concentration of 23699±384 μg F/g), or centrifuged varnish, containing only soluble fluoride (fluoride concentration of 258±97 μg F/g), were applied in a standardized manner on enamel slabs (n=8/varnish group/time), which were immersed in continuously renewed artificial saliva for up to 36 h. (CaF$_2$)-like reservoirs formed on enamel by varnish application were extracted using 1 M KOH and fluoride concentration was measured with ion specific electrode. The results were expressed as μg F/cm$^2$ of enamel area. Whole varnish formed significantly higher fluoride concentration on enamel than centrifuged varnish, reaching maximum concentration at 24 h (22.0±4.5 μg F/cm$^2$). Centrifuged varnish reached maximum concentration at 6 h (3.20±0.81 μg F/cm$^2$). In conclusion, a longer varnish retention time than the usually recommended could improve the anticaries effect of Duraphat® varnish, allowing that NaF particles, initially insoluble in the varnish matrix, prolong the reactivity with enamel.

Valor de cada questão = 1,0 ponto

RESPONDA EM PORTUGUÊS, DE ACORDO COM O TEXTO 1

1. O que significa o título do trabalho? ( traduza ou escreva o que entendeu)
O fluoreto de sódio insolúvel do/no Duraphat pode prolongar a reatividade do fluoreto do verniz retido na superfície dentária.

2. Descreva o método utilizado na pesquisa?
Verniz total, contendo fluoreto solúvel e insolúvel (concentração total de 23699±384 μg F/g), ou verniz centrifugado, contendo somente o fluoreto solúvel (concentração de 258±97 μg F/g), foram aplicados de maneira padronizada sobre blocos de esmalte (n =8/grupo de verniz/tempo), os quais foram imersos em saliva artificial com renovação contínua por até 36 h. Os reservatórios tipo CaF$_2$ formados no esmalte pela aplicação do verniz foram extraídos com KOH 1 M e a concentração de F foi medida utilizando um eletrodo específico.

3. Descreva os resultados?
O verniz total formou significativamente maior concentração de fluoreto no esmalte que o verniz centrifugado, atingindo concentrações máximas após 24 h (22,0±4,5 μg F/cm$^2$
TEXT 2: CAN CEMENT FILM THICKNESS INFLUENCE BOND STRENGTH AND FRACTURE RESISTANCE OF FIBER REINFORCED COMPOSITE POSTS?
(Penelas et al., Clin Oral Invest (2015))

Objectives: This study compared the influence of cement film thickness (CFT) on bond strength (BS) and fracture resistance (FR) of fiber-reinforced composite (FRC) posts to root canal.

Materials and methods: One hundred bovine incisors were used for BS and FR analysis (n = 10) and distributed into five experimental groups according to FRC post diameters (WhitePost DC no. 0.5, no. 1, no. 2, no. 3, no. 4), leading to five different CFTs. The canals were prepared using drill no. 4 provided by the post manufacturer and irrigated with 2.5 % NaOCl. After conditioning (24 % H2O2/5 min) and silanization, posts were cemented with resin cement. BS was evaluated using push-out test and FR using the compression test at 45°. A stereomicroscope was used to measure CFT and to analyze failure pattern. BS data were subjected to two-way ANOVA and Scheffé test for contrast (α = 0.05); FR data were subjected to one-way ANOVA.

Results: BS was significantly affected by CFT, as the most well-adapted post achieved the highest values (p < 0.05). BS was similar for all root thirds. CFT did not affect fracture resistance. No root fractures were observed.

Conclusions: A FRC post well adapted to the root canal results in higher BS values. Different CFTs did not influence the FR of teeth restored with FRC posts.

“Some aspects of fiber post retention have been studied, such as the influence of cement curing mode, cement type, post surface treatment, length, and post pattern. One of the features that is still controversial concerning fiber post retention is how the CFT could influence the retention of a FRC post to the root canal walls. While cast metal posts, usually luted with zinc phosphate cement, require a precise fit between the post and post space, there is no consensus when fiber posts are used.”

Valor de cada questão = 1,0 ponto

RESPONDA EM PORTUGUÊS, DE ACORDO COM O TEXTO 2

1. Qual foi o objetivo do trabalho?
O estudo comparou a influência da espessura da camada de cimento sobre a força de adesão(união) e resistência a fratura de pinos de fibra de vidro (pinos de fibra reforçados com compósitos) para o (utilizados para canais radiculares) canal radicular.

2. Descreva o que você entendeu dos resultados encontrados?
A força de adesão foi significativamente afetada pela espessura do cimento, os pinos mais bem adaptados alcançaram os maiores valores. A força de adesão foi similar para...
todos os terços radiculares. A espessura do cimento não afetou a resistência a fratura. Fraturas radiculares não foram observadas.

3. Quais as conclusões do trabalho?
Um pino de fibra bem adaptado no canal radicular resulta em valores mais altos de força de adesão. Diferentes espessuras de cimento não influenciaram a resistência a fratura de dentes restaurados com pinos de fibra (correto também... pinos de fibra reforçados com compósitos, pinos de fibra de vidro).

4. O parágrafo entre aspas e sublinhado faz parte da discussão do trabalho.
Escreva o que você entendeu ao fazer a leitura.
Ainda existe uma característica controversa em relação à retenção dos pinos de fibra. A dúvida é como a espessura do cimento poderia influenciar na retenção do pino de fibra nas paredes do canal radicular. No caso dos pinos metálicos, os mesmos requerem um ajuste preciso ente o pino e o espaço do pino (no canal radicular). Nos casos de pinos de fibra, não há consenso para isso. (se é necessário um ajuste preciso)

TEXT 3: LEIA O TEXTOABAIXO SOBRE ACUPUNTURA E ASSINALE VERDADEIRO OU FALSO NAS ALTERNATIVASABAIXO:

(Texto extraído do livro “intermediate English “EF – Education First”)

Valor de cada questão = 0,5 ponto

1 ( F ) Acupuncture became popular in China in the 1960s
2 ( F ) Acupuncture is the only approach used in Chinese medicine
3 ( F ) The Idea of balance is important in conventional medicine
4 ( V ) “Yin” and “yang” are two different kinds of energy
5 (F) Chinese doctors often practise surgery to restore balance
6 (V) Taking a patient’s pulse is an important part of Chinese medicine.
7 (V) Western doctors use more laboratory tests than Chinese doctors.
8 (F) Most western doctors now practise Chinese medicine.

TEXT 4: APICALLY EXTRUDED SEALERS: FATE AND INFLUENCE ON TREATMENT OUTCOME
(Ricucci et al, Volume 42, Number 2, February 2016- JOE)

Introduction: This retrospective study evaluated cases of unintentional overfillings for the fate of the extruded sealers and their influence on treatment outcome. Methods: One hundred five teeth treated by a single operator and exhibiting overfillings in the postobturation radiograph were included in the study. Seventy-five teeth exhibited apical periodontitis lesions at the time of treatment. Sealers included Pulp Canal Sealer (Sybron Dental, Orange, CA), PCS Extended Working Time-EWT (Sybron Dental), Tubli-Seal (Sybron Endo), Endomethasone (Septodont, Saint-Maur-des-Fosses, France), AH Plus (DeTrey GmbH, Konstanz, Germany), and Apexit (Ivoclar Vivadent, Schaan, Lichtenstein). Recall radiographs were compared with immediate postobturation films for removal of the extruded material and status of the periradicular tissues. Data were grouped as 1-, 2- and >4-year recall and statistically analyzed using the chi-square and Fisher exact tests. Results: As for the sealers’ fate, the only statistically significant differences at the 1-year recall were observed when comparing Tubli-Seal with AH Plus, Apexit, and Endomethasone (P < .05). At both the 2- and 4-year recalls, frequency of complete removal of AH Plus and Apexit was significantly lower when compared with all the other sealers (P < .05). No other significant differences were observed between groups. As for the influence on treatment outcome, there were no statistically significant differences between sealers at all follow-up periods (P > .05). Data from the >4-year recall revealed that 79% of the teeth with apical periodontitis lesions at the time of treatment had healed in comparison with 100% of the teeth with no apical periodontitis (P < .01). Conclusions: Not all extruded sealers were predictably removed from the periradicular tissues. Treatment outcome was not significantly affected by the type of extruded sealer. A significantly better outcome was observed for teeth with no lesion in comparison with teeth with apical periodontitis.

Valor de cada questão = 1,0 ponto

RESPONDA EM PORTUGUÊS, DE ACORDO COM O TEXTO 4

1. O que os autores do trabalho avaliaram?
   Avaliaram tratamentos onde existiram casos de extravasamento não intencional de cimento endodôntico para tomar conhecimento do destino (se o cimento foi reabsorvido ou não) e qual a influência desse extravasamento nos resultados do tratamento endodôntico.

2. Quantos dentes foram avaliados na amostra total e quantos tinham lesão apical?
   A amostra total foi composta de 105 dentes. 75 dentes tinha lesão apical.

3. Após 4 anos de controle dos casos, quem apresentou melhor taxa de sucesso em função da presença ou ausência da lesão apical?
   Os casos que não tinham a lesão apical.
4. **Escreva o que você entendeu da conclusão?**

Nenhum dos cimentos extruídos foram previsivelmente removidos dos tecidos periradiculares. O resultado do tratamento não foi afetado pelo tipo de cimento extruído. Um significante melhor resultado foi observado para dentes sem lesão apical em comparação com os dentes com lesão apical.

**TEXT 5: THE HISTORY OF IMPLANT DENTISTRY**  
(Jaime L. Lozada and Charles J. Goodacre – Implant Dentistry)

**History of Dental Disease**

The records of ancient civilizations indicate that dental disease and tooth loss have afflicted humankind for thousands of years. The Ebers Papyri is the most voluminous and best preserved of the Egyptian medical papyri. It is a compilation of Egyptian manuscripts (some of which were written as early as 3700 B.C.). It makes multiple references to dental maladies and discusses treatments for “bennet blisters” and teeth that “gnaw into the upper part of the flesh.” Radiographs made of Egyptian Pharoahs show periodontal disease and substantial tooth loss. A mandible from about 2500 years ago, discovered in Lebanon, shows periodontally involved mandibular anterior teeth splinted together with gold wire.

**Dental Implants**

Evidence of tooth replacement in the Americas was found in 1931 while Dr. and Mrs. Wilson Popenoe, an archeological team, were excavating in Honduras. They discovered a mandible of Mayan origin from about 600 AD that had tooth-shaped pieces of shells placed into the sockets of three missing mandibular incisors. The tooth-shaped shell implants and the jaw were examined radiographically and it was determined that compact bone had formed around 2 of the implants and the bone was radiographically similar to that which forms around blade implants. This may be the earliest example of any endosseous implant.

**Definition of a Dental Implant**

The Glossary of Prosthodontic Terms defines an implant as “a prosthetic device or alloplastic material implanted into the oral tissues beneath the mucosal or/and periosteal layer, and/or within the bone to provide retention and support for a fixed or removable prosthesis.”

**Valor de cada questão = 1,0 ponto**

**RESPONDA EM PORTUGUÊS, DE ACORDO COM O TEXTO 5**

1. O que as radiografias feitas dos faraós egípcios revelaram?

   Doença periodontal e substancial perda de dentes.

2. O que mostrou a mandíbula descoberta no Líbano?

   Dentes anteriores inferiores com envolvimento periodontal (periodontalmente envolvidos), splintados com fio de ouro.

3. Escreva o que você entendeu após a leitura do sub tópico “Dental Implants”?

   O texto trata da descrição do relato mais precoce encontrado sobre implante endossseus. Uma equipe de arqueólogos encontrou uma mandíbula de origem Maia, que tinha peças de conchas (casca também, ex. casca de noz) em forma de dente colocadas nos
alvéolos de três incisivos inferiores. Os implantes de conchas (casca também, ex. casca de noz) em forma de dentes e a mandíbula foram examinados radiograficamente e determinou-se que o osso compacto tinha formado em torno de dois dos implantes e o osso foi radiograficamente semelhante ao que se forma em torno de implantes laminados (ou somente implantes ou somente laminados). Este pode ser o primeiro exemplo de um implante endo ósseo.

4. **Traduza a definição de um implante dental?**
   um dispositivo protético ou material aloplástico implantados nos tecidos orais sob a mucosa e / ou camada de periósteo, e / ou no interior do osso para fornecer suporte e retenção para uma prótese fixa ou removível