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INFLUÊNCIA DA APLICAÇÃO DE ESTIMULAÇÃO ELÉTRICA E DE PROTEÍNAS DERIVADAS DA MATRIZ DO ESMALTE NO REPARO DE FERIDAS EM PALATO: dois estudos clínicos randomizados

2019

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Miguel MMV. Influência da aplicação de estimulação elétrica e de proteínas derivadas da matriz do esmalte no reparo de feridas em palato: dois estudos clínicos randomizados [dissertação]. São José dos Campos (SP): Universidade Estadual Paulista (Unesp), Instituto de Ciência e Tecnologia; 2019.

RESUMO

Procedimentos periodontais cirúrgicos podem levar a execução de feridas na região do palato como por exemplo na remoção de enxertos autógenos. Contudo, tais abordagens podem causar ao paciente certo grau de morbidade e desconforto na área operada. Procura-se, portanto, terapias para a área palatina auxiliando a cicatrização de feridas no local doador, que eventualmente também poderiam ser utilizadas para outras finalidades. Assim, o objetivo dos presentes estudos clínicos foi avaliar clínica e imunologicamente os resultados de três meses de duas abordagens, estímulo elétrico (EE) e matriz derivada do esmalte (EMD), no reparo de feridas palatinas advindas da remoção de enxerto gengival livre para preservação de alvéolo. Dois ensaios clínicos randomizados foram realizados seguindo o CONSORT-STATEMENT 2010. (1) Selecionou-se 53 pacientes apresentando necessidade de preservação de rebordo, divididos nos grupos: Sham (n=27) - simulação de EE na ferida aberta no palato, EE (n=26) - estímulo elétrico na ferida aberta no palato. As avaliações clínicas revelaram fechamento precoce da ferida palatina, bem como epitelização desta, aos 7 e 14 dias no grupo EE quando comparado ao grupo Sham ($p<0,05$ e $p=0,03$, respectivamente). Sintomatologia dolorosa revelou-se reduzida no grupo EE em relação ao grupo Sham aos 3 dias pós-operatórios ($p=0,008$). Bem como, uma melhoria na qualidade de vida do paciente foi reportada após 2 dias do procedimento cirúrgico ($p<0,04$). A modulação de certos biomarcadores de modo favorável à reparação tecidual se fez presente com o uso da eletroterapia. Deste modo, conclui-se que o uso da eletroterapia apresenta benefícios clínicos e imunológicos no reparo de feridas. (2) Selecionou-se 44 pacientes com necessidade de preservação de rebordo, divididos nos grupos: Controle (n=22) - ferida aberta no palato sem terapia e EMD (n=22) - aplicação de Emdogain® na ferida palatina. Nenhum benefício clínico, como fechamento da ferida e epitelização, foi visto com a aplicação de EMD. Contudo, verificou-se uma modulação favorável em biomarcadores inflamatórios importantes ao reparo bem como menor sintomatologia dolorosa. Por conseguinte, o uso do EMD revelou uma modulação positiva do processo inflamatório local à resolução da ferida.

Palavras-chave: Cicatrização de feridas. Estímulo elétrico. Matriz derivada do esmalte. Palato.

Miguel MMV. Influence of electric stimulation and enamel matrix protein derivative application on palatal wound healing: two randomized clinical trials [dissertation]. São José dos Campos (SP): São Paulo State University (Unesp), Institute of Science and Technology; 2019.

ABSTRACT

Surgical periodontal procedures may favor the formation of wounds in the palatal region as for example to obtain autogenous graft. Discomfort and a certain degree of morbidity may be present in patients undergoing this procedure. Thus, treatments for the palatine donor area has been sought to aid wounds healing and eventually be useful for other functions. Therefore, the aim of the investigations was to evaluate the 3-month clinical and immunological outcomes of two approaches, electric stimulus (EE) and enamel matrix derivative (EMD), on palatal open wound healing due to harvesting a graft for socket preservation. For this, two clinical trials were carried out following the CONSORT STATEMENT 2010. (1) Fifty-three patients presenting need of ridge preservation were divided into 2 groups: Sham (n=27) - sham electrical stimulation on the open palatal wound; EE (n=26) - electrical stimulation on open palatal wound. Clinical perceptions shown early wound closure, as well as, better epithelization in 7 and 14 days after surgery in EE group when related to Sham group ($p<0,05$ e $p=0,03$, respectively). Painful symptomatology was less reported in EE group in comparison to Sham group at 3 days after surgical approach ($p=0,008$). Likewise, an improvement in Oral Health Impact Profile was reported after 2 days of the procedure when combinate with electrotherapy protocol ($p<0,04$). Biomarkers modulation occurred in a favor manner when electric stimulus was applied at the wound. Therefore, the use of electrotherapy presented benefits for clinical wound healing and influenced the expression of favorable biomarkers during injury resolution. (2) Forty-four patients presenting need of ridge preservation were allocated into 2 groups: Control (n=22) - open palatal wound without treatment and EMD (n=22) – Emdogain® applied on the open palatal wound. None clinical benefits, as wound closure and epithelization was seen when EMD was used. However, important biomarkers modulation for repair occurred, as well as, less painful symptomatology. In conclusion, EMD application shown a positive influence in local inflammation during wound repair.

***Keywords**: Wound healing. Electric stimulus. Enamel matrix proteins. Palate.*

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