Academic stress influences periodontal health condition and interleukin-1 beta level

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Abstrak

Stress akademik mempengaruhi kesehatan jaringan periodontal dan kadar interleukin-1 beta. Stres merupakan faktor risiko penyakit periodontal yang dapat meningkatkan kadar interleukin-1 dan berperan pada kerusakan jaringan periodontal. Tujuan: menganalisis hubungan antara stres akademik pada mahasiswa program studi spesialis dengan kondisi jaringan periodontal dan kadar interleukin-1 beta dari cairan krevikular gingiva. Metode: Tiga puluh delapan subjek penelitian mengisi kuesioner Graduate Dental Environtmental Stress (GDES),
pemeriksaan klinis periodontal, dan pengambilan sampel dari cairan sulkus gingiva dari delapan titik di regio anterior dan posterior serta pemeriksaan kadar interleukin-1 beta dengan Enzyme-linked Immunosorbent Assay (ELISA). Hasil: Terdapat perbedaan bermakna (p<0,05) antara tingkatan stres akademik dengan kondisi jaringan periodontal yaitu tingkat kebersihan mulut (p=0,038), indeks perdarahan gingiva (p=0,02), namun tidak pada kedalaman poket
dan tingkat perlekatan klinis (p=0,972). Terdapat perbedaan bermakna (p=0,03) antara kadar interleukin-1 beta dengan tingkatan stres akademik. Tidak terdapat perbedaan bermakna (p>0,05) antara kadar interleukin-1 beta dengan kondisi jaringan periodontal yaitu tingkat kebersihan mulut (p=0,465), indeks perdarahan gingiva (p=0,826), kedalaman poket (p=0,968), tingkat perlekatan klinis (p=0,968). Simpulan: Stres akademik memiliki pengaruh terhadap risiko penyakit periodontal dengan peningkatan kadar interleukin-1 beta dalam cairan krevikular gingiva.
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Stress is a risk factor for periodontal disease, causing increase levels of interleukin-1 beta that involve in periodontal destruction. Objective: To analyze the relationship between academic stress in residency program students conditions and levels of interleukin-1 beta in gingival crevicular fluid. Methods: Thirty eight subjects filled the questionnaire of Graduate Dental Environtmental Stress (GDES), periodontal examination and samples of gingival crevicular fluid were tested for interleukin-1 beta with the Enzyme-linked Immunosorbent Assay (ELISA) test. Results: There were significant differences between academic stress to periodontal tissue in oral hygiene (p=0.038),
bleeding on probing index (p=0.02), but no significant differences in pocket depth and loss of attachment (p=0.972). There were significant differences between academic stress to levels of interleukin-1 beta (p=0.03), but no significant differences between levels of interleukin-1 beta to periodontal tissue in oral hygiene (p=0.465), bleeding on probing index (p=0.826), pocket depth (p=0.968), and loss of attachment (p=0.968). Conclusion: Academic stress influences the periodontal risk factor and level of interleukin-1 beta.