# Peran Gen Interleukin-8 dan Interleukin-18 Dalam Respon Imun Innate Dalam Cairan Sulkus Gingiva Anak Penderita Stunting Usia 6-8 Tahun = The Role of Interleukin-8 and Interleukin-18 in Innate Immune Response in Crevicular Gingival Fluid in Stunted Children Aged 6 to 8 Years

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Abstrak

Latar Belakang: Anak-anak yang menderita stunting memiliki berbagai kekurangan jika dibandingkan anak-anak sebayanya yang memiliki HAZ normal, baik dari segi pertumbuhan fisik, emosional, maupun dalam sistem imun. Salah satu komponen sistem imun yang ada dalam tubuh adalah sitokin proinflamasi interleukin-18 yang berperan sebagai faktor kemotaksis sel T, basofil, serta neutrofil, penginduksi interleukin lainnya, serta menginduksi sel Th1 dan IFN- I³.
Tujuan: Menganalisis ekspresi gen IL-18 pada anak stunting jika dibandingkan dengan anak dengan HAZ normal, menganalisis korelasi antara status stunting, ekspresi IL-18, status infeksi cacing, serta status OHI-S.
Metode: Sampel diambil dari bahan biologis tersimpan berupa RNA cairan sulkus gingiva anak 6-8 tahun di Nusa Tenggara Timur (NTT) (n=8). Kemudian dilakukan ekstraksi RNA, sintesis cDNA, pre amplifikasi, dan kemudian dilakukan real-time PCR. Hasil: Tidak ditemukan perbedaan bermakna secara statistik pada ekspresi gen IL-18 anak stunting dibanding anak dengan HAZ normal (p  0,05) dan tidak pula ditemukan korelasi baik antara status stunting dan status infeksi cacing, ekspresi IL-18 dan status infeksi cacing, status stunting dan OHI-S, maupun ekspresi gen IL-18 dan status OHI-S (p  0,05).
Kesimpulan: Meskipun ditemukan adanya downregulation pada ekspresi gen IL-18 anak stunting jika dibandingkan anak normal, perbedaan tersebut tidak bermakna secara statistik Tidak ditemukan korelasi pada ekspresi gen IL-18, status infeksi cacing, serta status OHI-S.
.....Background: Stunted children have many handicaps compared to their normal age counterparts who have normal HAZ, either in physical growth, emotional growth, or in their immune system. Interleukin-18 is a part of the immune system, a proinflammatory cytokine that acts as a chemotaxis factor for T-cell, basophil, neutrophil, and inducts IFN- Î³, Th1, and other cytokines.
Purpose: To analyze IL-18 expression in stunted children compared to their normal age counterpart, to analyze the correlation between stunting status, IL-18 expression, helminths infection status, and OHI-S.
Methods: Samples were stored biological material, taken from 6 to 7 years old’s gingival crevicular fluid from NTT (n=8). RNA was extracted from samples, then synthesized to cDNA, preamplified, and analyzed in RT-PCR.
Results: The difference in IL-18 expression in stunted children compared to children with normal HAZ was not statistically significant.  There were no correlation between stunting status and helminths infection status, IL-18 expression and helminths infection status, stunting status, and OHI-S, nor IL-18 expression and OHI-S.
Conclusion: Even though a downregulation in IL-18 expression in stunted children compared to children with normal HAZ was found, the difference was not statistically significant. There was also no correlation

between IL-18 expression, helminths infection status, and OHI-S status.