Analisis Hubungan Tingkat Hormon Ghrelin pada Saliva Anak dengan Status Stunting di NTT = Correlation Analysis of Salivary Ghrelin Hormone Level in Children with Stunting in NTT

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Abstrak

Latar Belakang: Stunting merupakan salah satu kondisi malnutrisi yang menjadi permasalahan tumbuh kembang pada anak secara global. Di Indonesia, prevalensi stunting tertinggi berada di provinsi Nusa Tenggara Timur (NTT). Beberapa penelitian sebelumnya menyatakan kondisi stunting dapat menyebabkan beberapa dampak panjang, salah satunya adalah peningkatan risiko terjadinya obesitas. Hal ini diduga berkaitan dengan hormon ghrelin yang ditemukan dalam tubuh. Namun, sampai saat ini belum ditemukan adanya hubungan antara tingkat hormon ghrelin dengan kondisi stunting yang berpotensi menyebabkan obesitas.
Tujuan: Menganalisis perbedaan tingkat hormon ghrelin pada saliva anak usia 6-8 tahun pada kelompok status nutrisi stunting dan non stunting serta menganalisis hubungan tingkat hormon ghrelin pada saliva anak usia 6-8 tahun dengan status nutrisi.
Metode: Penelitian ini merupakan penelitian analitik laboratorik terhadap 96 sampel saliva anak usia 6-8 tahun di NTT yang sebelumnya telah dikelompokkan berdasarkan status nutrisi stunting dan non stunting sesuai pengukuran standar WHO. Saliva subjek diuji menggunakan BioEnzy© ELISA Kit untuk memperoleh antigen hormon ghrelin dari saliva dan hasilnya dikuantifikasi menggunakan ELISA reader dengan panjang gelombang 450 nm. Selanjutnya, nilai optical density (OD) yang terbaca di ELISA reader dikorelasikan dengan status nutrisi height-for-age.
Hasil: Tingkat hormon ghrelin pada saliva anak stunting ditemukan memiliki perbedaan bermakna dengan tingkat hormon ghrelin pada saliva anak non stunting ($p < 0.05$), dimana rata-rata tingkat hormon ghrelin pada saliva anak stunting ditemukan lebih tinggi dibanding pada saliva anak non stunting. Terdapat hubungan linier negatif lemah yang bermakna antara tingkat hormon ghrelin pada saliva anak usia 6-8 tahun di NTT dengan status nutrisi ($r = -0.238$, $p < 0.05$).
Kesimpulan: Terdapat perbedaan bermakna antara tingkat hormon ghrelin pada saliva anak stunting non stunting. Selain itu, terdapat korelasi yang bermakna antara tingkat hormon ghrelin pada saliva anak usia 6-8 tahun di NTT dengan status nutrisi. Penelitian lanjutan perlu dilakukan untuk mengetahui peran ghrelin dengan kondisi stunting yang berpotensi menyebabkan obesitas.
.....Background: Stunting is a condition of malnutrition which became a problem for growth and development in children globally. In Indonesia, the highest prevalence of stunting is in the province of East Nusa Tenggara (NTT). Several previous studies have stated that stunting can cause several long-term impacts, one of them is an increased risk of obesity. This is suspected to be related to the ghrelin hormone found in the body. However, until now there has not been found a relationship between the level of the hormone ghrelin with stunting conditions that potentially cause obesity.
Objective: To analyze the differences of salivary ghrelin hormone levels in children aged 6-8 years with stunting and non-stunting groups and to analyze the relationship of salivary ghrelin hormone levels in children aged 6-8 years with nutritional status.

Methods: Saliva samples were collected from 96 children aged 6-8 years in NTT which had previously been grouped based on stunting and non-stunting nutritional status according to WHO standard measurements. The subject's saliva was tested using the BioEnzy© ELISA Kit to obtain the ghrelin hormone antigen from saliva and the results were quantified using an ELISA reader with a wavelength of 450 nm. Furthermore, the optical density (OD) values read in the ELISA reader were correlated with height-for-age nutritional status.
Results: The level of salivary ghrelin hormone in stunting children was found to have a significant difference with the level of salivary ghrelin hormone in non-stunting children ($p < 0.05$), where the average level of salivary ghrelin hormone in stunting children was found to be higher than in saliva of non-stunting children. There was a significant weak negative linear correlation between salivary ghrelin hormone levels in children aged 6-8 years in NTT and nutritional status ($r = -0.238$, $p < 0.05$).
Conclusion: There is a significant difference between the levels of salivary ghrelin hormone in children with stunting and non-stunting conditions. There is also a significant correlation between the level of salivary ghrelin hormone in children aged 6-8 years in NTT with nutritional status. Further research is needed to determine the role of ghrelin in stunting conditions that potentially cause obesity.