

Elastase-1 concentration in feces of term and preterm infants aged 0 – 4 months

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Abstrak

Kadar elastase-1 dalam feses menggambarkan fungsi eksokrin pankreas. Beberapa laporan telah diajukan oleh peneliti-peneliti Eropa, tetapi sejauh ini belum ada laporan dari Indonesia terutama mengenai bayi. Tujuan penelitian ini ialah untuk mengetahui kadar elastase-1 feses bayi yang berumur 1-120 hari, sebagai laporan pendahuluan penelitian tentang ontogeni elastase-1 pankreas pada bayi cukup bulan dan kurang bulan. Metoda yang dipakai ialah kadar elastase-1 dalam feses diperiksa pada 28 bayi kurang bulan dan 34 bayi cukup bulan yang sehat, berumur 1-120 hari. Hasilnya ialah kadar elastase-1 feses bayi kurang dari 14 hari berkisar di bawah 200 µg/g feses. Pada hari pertama 80% bayi kurang bulan dan 60% bayi cukup bulan mempunyai kadar < 200 µg/g feses, pada umur 7 hari 50% bayi kurang bulan dan 33% bayi cukup bulan mempunyai kadar elastase-1 < 200 µg/g feses. Setelah umur 14 hari, kadar elastase-1 feses ialah > 200 µg/g feses, tidak tergantung masa gestasi. Laporan pendahuluan ini mendukung penelitian-penelitian terdahulu yaitu kadar elastase-1 feses mencapai kadar normal setelah umur 14 hari. Penelitian lebih lanjut diperlukan untuk mengetahui kadar elastase-1 feses pada bayi umur kurang dari 14 hari. (Med J Indones 2003; 12: 69-72)

Fecal elastase-1 concentration reflects exocrine pancreatic function. There have been some reports from Europe, but so far there has not been a report of fecal elastase-1 concentration in Indonesia, especially concerning infants. The aim of this study is to know the concentration of elastase-1 in feces of infants aged 1-120 days as a preliminary report of the study of the ontogeny of pancreatic elastase-1 in term and preterm infants. Fecal elastase-1 were measured from feces of 28 healthy preterm and 34 healthy term infants up to 120 days (4 month) of age. Elastase-1 concentration in infants less than 14 days of age fluctuated below 200 µg/gram feces. At the first day of life 80% preterm and 60% term infants had elastase-1 concentration less than 200 µg/gram feces, and by the age of 7 days 50% preterm and 33% term infants had elastase-1 concentration less than 200 µg/gram feces. After 14 days of age its concentration was more than 200 µg/gram feces, regardless of gestational age. This preliminary study corroborates supported the previous studies that the level of fecal elastase-1 reached normal level after 14 days. Future longitudinal study is needed to know elastase-1 concentration in infants less than 14 days. (Med J Indones 2003; 12: 69-72)