Urinary N-Acetyl- β -D-Glucosaminidase Excretion in Newborns

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Dear Sir,

We read with much interest the article of Simeoni et al. [1] about the specific developmental profiles of lysosomal and brush border en-zymuria in the human. Preterm urinary N-acetyl- β -D-glucosamini-dase (NAG) activity was greater than that in term neonates in their study. The most widely used are the lysosomal enzyme NAG and the brush border enzyme alanine aminopeptidase which have several advantages: (1) both are highly sensitive markers of renal tubular damage, (2) increase of their activity in urine usually precedes changes in the traditional renal function tests and (3) their activity varies with the activity of the pathological process [2]. In our study, urinary NAG excretion in term newborns and their ages were compared. The mean NAG activity in urine was 0.636 ± 0.204 U/g creatinine in 25 term newborns. The age range of the cases was 5–28 days. Statistically no significant correlation between the age of the newborn and urinary NAG excretion was found ($r = 0.424$; $p > 0.05$). The NAG activity was measured in 24-hour urine collections with a colorimetric assay (kit cat. No. 875406, Boehringer Mannheim Biochemical).

In conclusion, we found that urinary NAG excretion did not decrease with aging during the neonatal period. We want to emphasize that the consistency of urinary NAG excretion in the neonatal period is important for neonates longitudinally evaluated according to urinary NAG excretion.

References

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