

## *Plasma cholinesterase deficiency in a neonate: a follow-up*

To the Editor:

We reported a two-day-old infant in 1993 who had apnoea lasting six hours following the intravenous administration of succinylcholine.<sup>1</sup> The results of the plasma cholinesterase level and dibucaine number indicated a congenital absence of plasma cholinesterase enzyme. Her cholinesterase activity measured at three days of age was  $0.2 \text{ U} \cdot \text{ml}^{-1}$  (normal:  $3.4\text{--}6.5 \text{ U} \cdot \text{ml}^{-1}$ ) and the dibucaine number was  $<5\%$  (normal 73-90%). Both parents and siblings had normal cholinesterase levels and dibucaine numbers, and it was felt that the parents were heterozygous for the silent gene.

In a Letter to the Editor, Drs. Vassallo and Goudsouzian suggested that analysis of plasma cholinesterase activity should be made at an older age in our patient before a definitive diagnosis of cholinesterase deficiency is made.<sup>2</sup>

At 27 mo, our patient returned for a follow-up plasma cholinesterase level which was  $0.2 \text{ U} \cdot \text{ml}^{-1}$ . The dibucaine number could not be calculated due to the low value for plasma cholinesterase. This confirms that our patient does have cholinesterase deficiency and not a transiently low level of plasma cholinesterase activity due to her young age.

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### REFERENCES

- 1 Pasquariello CA, Schwartz RE. Plasma cholinesterase deficiency in a neonate. *Can J Anaesth* 1993; 40: 529-31.
- 2 Vassallo SA, Goudsouzian NG. Plasma cholinesterase activity in infants (Letter). *Can J Anaesth* 1994; 41: 654.

### REPLY

*It is reassuring to learn that Drs. Pasquariello and Schwartz were able to obtain a follow-up plasma cholinesterase level when the above patient reached 27 months of age. Repeat testing confirmed a very low plasma cholinesterase activity and now a definitive diagnosis of cholinesterase deficiency is appropriate. We applaud their persistence.*

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