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Sodium valproate and measles virus replication

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Sir: It is serendipity that I happened upon two distinct, yet possibly related articles. The first is a case report by Cruzado et al. [1] in which they describe a patient with rapidly progressive subacute sclerosing panencephalitis following a congenital infection with measles. The authors detail the clinical course of an 18-month-old girl who was treated unsuccessfully with isoprinosine and sodium valproate. Despite pharmacological therapy, seizure control was never obtained, her condition worsened, and she died 10 months after seizure onset at the age of 28 months. It appears that valproate was the sole antiseizure medication utilized throughout her disease process.

The second publication involved an analysis of the in vitro effects of sodium valproate on viral replication, including measles virus [2]. The investigators found that valproate stimulated the replication of measles virus in a concentration and time dependent manner. Electron microscopy revealed more abundant viral nucleocapsids in drug-treated infected cells versus infected cells that had not been exposed to sodium valproate. There was also a difference in the quantity of intranuclear and intracytoplasmic inclusion bodies present in each cell type. Recognizing the limitations of the study design, the authors concluded that further in vivo analysis was

warranted. They also recommended the cautious use of valproate in patients with neurologic infections due to measles virus until more data became available.

I am not suggesting that the child described in the case report would have fared any differently had an alternative to valproate been chosen. At this point, the influence of valproate on her outcome is pure conjecture, however, the potential impact cannot be dismissed. Considering the limited in vitro results and case report, clinicians are faced with an interesting quandary. Practitioners should be aware of the potential increased viral burden when sodium valproate is used in patients infected with measles virus.

References

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