Lomotil in diarrhoeal illnesses

Sir,
The article by Curtis and Goel (Archives, 1979, 54, 222) prompts me to place the usage of Lomotil in young children in the tropics in its right perspective. The problems of diarrhoea in the tropics are quite different when compared with temperate climates, and management of this condition is therefore also different.

In situations where children have little or no access to optimal therapeutic management, especially fluid therapy, symptomatic control of diarrhoea does become important and it is in this context that I find little objective evidence for Curtis and Goel to draw a general conclusion that the use of Lomotil is difficult to justify in children.

In their study only 6 of 45 patients had actually been prescribed Lomotil for a diarrhoeal illness, of which 4 took an accidental overdose. The remaining 39 children had ingested large quantities of the drug accidentally without any indication for its use, when adult relatives had been prescribed the drug. The authors state that no correlation was found between severity of symptoms and dose ingested, but the upper limits of dose range in their paper show that in the mild, moderate, and severe cases the quantity of drug ingested was 23 times, 33 times, and 40 times the therapeutically recommended dose.

Some time ago we were equally concerned about the use of Lomotil and so we conducted a dose response study in children suffering from nonspecific and specific diarrhoea (Karan et al., 1976), using Lomotil in a dosage range of 0.2 to 0.3 mg/kg, and observed that the optimal dose for Indian children appears to be about 0.25 mg/kg. Furthermore, when used in this therapeutic dose there were no significant side effects or signs of toxicity, although children taking 0.3 mg/kg did have slightly more side effects, but these were not statistically significant.

I feel that Lomotil does have a role in managing diarrhoea in the tropics if used judiciously, but problems can arise if the correct dose is not given. Accidental over-dosage can of course occur with any drug.

References

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Dr Goel comments:
It was certainly not our intention to exclude the use of Lomotil as an anti-diarrhoeal agent in children in the tropics. No doubt all who treat such children would agree that the mainstay of treatment of diarrhoea in children in any part of the world is the correction of fluid, electrolyte, and acid-base status, and not the reduction of intestinal motility by an anti-diarrhoeal agent. If, as suggested by Dr Karan, such therapeutic measures are not available,
then perhaps one could use an anti diarrhoeal drug, such as Lomotil, though only with caution. This is because, in our experience, it is not possible to predict what dose will be toxic in children.

Both Dr Karan and Dr Limaye emphasise that in our cases severity of the symptoms was related to the dose ingested, and they also imply that symptoms only occur above a recommended therapeutic dose 0-25 mg/kg a day. But they fail to observe that on the contrary the figures for the lower limit of the ingested dose (mild, 0-62 mg/kg; moderate, 0-25 mg/kg; and severe, 0-77 mg/kg) did not correlate with the severity of symptoms. We suggest that if it is necessary to use Lomotil the prescribing doctor should take cognisance of the risks.

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Infantile cortical hyperostosis with raised immunoglobulins

Sir,

Ramchander and Ramkissoon (Archives, 1978, 53, 426) drew attention to the IgA and IgM levels in 2 cases of infantile cortical hyperostosis (Roske-de Toni-Caffey syndrome). They said that a virus infection during intrauterine or neonatal life might be the cause of this disorder.

I know 2 Italian families in which this disease was diagnosed in two generations: in the first family, in the mother and her son; in the other family, the father, the daughter, and the father's first-cousin all had the disease (Duillo and Cerruti Mainardi, 1969). A few months ago another girl was born in the second family, and she shows the same disorder at age 8 weeks.

These cases, as do many other familial ones in the literature, support de Toni's hypothesis (de Toni, 1943) that genetic factors may play a role in the aetiology of this mysterious disease.

References


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Polyarthritis associated with Wilson’s disease

Sir,

A 14-year-old boy was admitted to hospital in August 1978 with an acute attack of polyarthritis which he had had for one day, and which affected both knees and elbows.

There was no history of sore throat, and the family history was unremarkable. On examination he was pale, and the affected joints showed effusion with tenderness and heat. Small spider telangietases were present over the upper sternum, and both spleen and liver were slightly enlarged. Slit-lamp examination showed Kayser Fleischer rings in both corneae.

Full blood picture, ESR, urine analysis, liver function tests, ECG, serum urate, Hb electrophoresis, C-reactive protein, latex-fixation test, throat swab culture, lupus erythematosus phenomenon, were all negative. ASO titre, 333 IU/ml. Percutaneous liver needle biopsy showed fatty changes. Serum copper 77-96 μg/100 ml (12 μmol/l), serum caeruloplasmin 105 mg/l (10-5 mg/100 ml), urinary copper 261 μg/24h (4-09 μmol/24h).

The boy subsequently developed two further attacks of polyarthritis during the next 2 months; the findings and investigations then were similar with ASO titre 166 and 250 IU/ml.

He responded well to paracetamol initially, and was then put on d-penicillamine, when he remained well until last seen in June 1979. The association of polyarthritis with Wilson's disease has not been previously reported, and may have been coincidental, but slit-lamp examination of atypical cases of arthritis in children would be prudent.

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Sodium valproate, pregnancy, and neonatal hyperglycinaemia

Sir,

It has been demonstrated that sodium valproate (SV) crosses the placenta freely and that maternal serum levels will reflect fetal serum levels (Archives, 1979, 54, 240). The SV concentration in the serum of a neonate was of the same order as that of the mother's at delivery, but fell to insignificant levels by 5 days and was undetectable at 29 days. As this child appeared healthy, it was concluded that the use of SV in pregnancy was safe.

On the other hand, administration of SV is known to cause hyperglycinaemia and hyperglycinuria in patients suffering from epilepsy (Jaeken et al., 1977; Kamoun and Parvy, 1978; Similä et al., 1979). In experiments on animals it has been shown that the rate of influx of glycine and other amino-acids into the brain is higher in the newborn period than later in life (Seta et al., 1972; Banos et al., 1978). In addition, high concentrations of glycine, which are found in nonketotic hyperglycinaemia and many organic acidemias, are associated with severe impairment of neuronal function, and therefore a high plasma level of glycine during early postnatal life may be a risk factor (Tanaka, 1975; von Wendent et al., 1978). Therefore, we monitored the clinical state and the levels of plasma glycine and serum SV postnatally in 2 neonates; in both, the mothers had received SV treatment during pregnancy.