Emetine Hydrochloride and Chloroquine in the Treatment of Children with Amoebic Liver Abscess

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Although amoebic liver abscess is infrequent in children, the outcome is much less favourable than it is in adults. When treated with combined emetine hydrochloride, chloroquine, and aspiration, the prognosis is excellent in adults (Wilmot, 1962), this régime being more successful than treatment with a single drug (Wilmot, Powell, and Adams, 1959; Wilmot, Powell, MacLeod, and Elsdon-Dew, 1964). In children our current therapy is similar to that employed successfully in adults, but our mortality has been over 50% (Scragg, 1960). In this short paper we compare the results of treatment in two groups of children with amoebic liver abscess, the one group treated with emetine hydrochloride and the other with chloroquine. This trial was designed to determine whether the high mortality in children might be due to the toxic effect of emetine, particularly on the myocardium.

Material and Methods

Studies were made on 28 African children, their ages ranging from 6 months to 12 years. The diagnosis of amoebic liver abscess was proved by the aspiration of characteristic pus from the liver in all patients who were randomly placed on one of the following two treatment régimes.

(a) Emetine hydrochloride 1 mg./kg. day by subcutaneous injection for 10 days.

(b) Chloroquine 15 mg. base/kg. day orally for 21 days.

In those who received emetine, electrocardiograms were done before and after completion of their course of treatment.

Results

One patient who received emetine hydrochloride and another who was placed on the chloroquine

régime died within 12 hours of admission and have been excluded from the series.

The results of the remaining 26 patients are summarized in the Table.

TABLE
Results of Treatment

	No. of Patients	Cure	Deaths	Relapse
Emetine HCl ..	12	7	3	2
Chloroquine ..	14	6	7	1

The number of cures in the two groups was similar, and there were 3 deaths in those who received emetine, compared with 7 in the chloroquine group. 2 children who relapsed on emetine subsequently recovered when given chloroquine, whereas the chloroquine relapse was cured by a course of emetine hydrochloride.

Electrocardiographic findings. Although T wave inversion occurred in 4 children who received emetine, arrhythmias, conduction defects, or significant tachycardia did not occur.

Discussion

The use of emetine in children has been the subject of long-standing controversy. Some authors have stated that it is well tolerated in the young (Archibald, 1914; Teitel, 1929) and others have stressed its dangers (Buchmann, 1926; Le Roy des Barres, 1930; Merle, 1949). In some deaths ascribed to emetine in children, dosage appears to have been excessive (Snell, 1915; Kilgore, 1916). In other instances fear of toxicity has led to inadequate dosage and therapeutic failure (Deutsch, 1927).

In the present trial the cure rates of the two régimes were similar, though there were fewer deaths in the emetine group. Despite the fairly

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small number of children treated, the evidence suggests that toxicity due to emetine is not responsible for the high mortality of amoebic liver abscess in our children. The less favourable prognosis in the young is not the result of drug toxicity, but is because the condition itself is more dangerous in children than in adults. Emetine is as well tolerated in children as in adults, but it should be emphasized that our findings are only applicable to the dosage used in this study. Cure by the alternative drug of those who relapsed indicates that combined therapy would be desirable.

Summary

The results of a comparative trial of emetine hydrochloride and chloroquine, respectively, in the treatment of amoebic liver abscess in children are presented.

The number of children classified as cured was similar with each drug.

There was no clinical or electrocardiographic evidence that emetine toxicity was responsible for any fatalities.

The findings suggest that a combination of the two drugs concerned is more effective in the treatment of this condition than the use of a single drug.

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