CORRESPONDENCE

THE EFFICACY OF ANTACID THERAPY

Sir,—The efficacy of antacid therapy has been investigated in 119 obstetric patients presenting for general anaesthesia in the Bristol Maternity Hospital and Southmead Hospital. Fifty-seven patients investigated consecutively at the Bristol Maternity Hospital (B.M.H.) were grouped as follows:

(1) Those who had received two or more 15-ml doses of mist. magnesium trisilicate as part of a 2-hourly regimen in preparation for general anaesthesia (Crawford, 1970) following a labour of variable duration.

(2) Those who had been starved for at least 4 h and who had received two 15-ml doses of mist. magnesium trisilicate within the hour preceding induction of anaesthesia for elective procedures.

(3) Those who were given a dose of either 15 ml of 0.3M sodium citrate (Lahiri, Thomas and Hodgson, 1973) or 30 ml of mist. magnesium trisilicate as the sole antacid before emergency surgery.

At Southmead Hospital routine antacid therapy was not prescribed and all patients were given 0.3% molar sodium citrate 15 ml a few minutes before induction of anaesthesia.

Following the induction of general anaesthesia, a double-lumen Salem Sump gastric tube was passed into the stomach and the contents were aspirated. The volume was measured and pH was estimated using a pH meter (7010 E.I.L.). A nasogastric tube was not passed before operation since this was not part of the routine care in the two units.

Preliminary investigations revealed that the pH of samples did not change over a period of 1 month when stored either at room temperature or in a refrigerator. In addition, the use of different containers (plastic or glass) for storage of gastric contents was not found to affect the results.

The volume of gastric contents aspirated varied between 3 and 350 ml. However, the patients in both hospitals had received a large variety of drugs and had ingested widely differing volumes of fluid before induction of anaesthesia. A number of patients were given i.v. atropine or hyoscine and ingested a number of drugs and had ingested widely differing volumes of fluid before induction of anaesthesia.

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Using the criterion of a pH of 3 for estimating the likelihood of the development of acid aspiration syndrome (Crawford, 1971), 13 patients in B.M.H. were at risk. Nine had received regular antacid therapy and four had received two 15-ml doses of mist. magnesium trisilicate (table I). Twelve patients in Southmead Hospital were at risk.

Approximately 20% of patients in both hospitals remained exposed to the risk of Mendelson’s syndrome (Mendelson, 1946). This figure is a considerable improvement on the 50% of patients whose gastric pH would be less than 3 units if no antacid therapy were employed (Taylor and Pryse-Davies, 1966), and antacids are therefore an important part of the preoperative preparation of obstetric patients. However, routine antacid therapy utilized in these two units would still leave 140 patients per annum at risk. Still greater numbers of patients are at risk if pH 3.5 is taken as the critical point (Roberts and Taylor, 1975; Taylor, 1975).

Obviously a totally effective antacid regimen has not yet been elaborated and the obstetric anaesthetist must remain alert to the reduced, but still present, risk of Mendelson’s syndrome.

W. D. WHITE
J. M. CLARK
G. H. M. STANLEY-JONES
Bristol

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