Operative blood loss was measured gravimetrically and the mean loss was found to be 128.1 ml. Nine patients had lost more than 10% of their total blood volume.

A comparison of the effects of two anaesthetic agents, halothane and ether, on the operative blood loss was studied. No significant difference between the two agents was observed.

The need for early blood transfusion where haemorrhagic complications occur is emphasized.

It is suggested that a pre-operative deficit of fluid intake combined with post-operative vomiting and haemorrhage can lead to a fluid deficiency requiring early intravenous replacement.

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Preliminary Communications

Studies on the Inhibitory Effect of Erythrose on the Development of Experimental Cholera

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It has recently been reported by Royx Chowdhury and Datta (1965) that erythrose inhibits the growth of *Vibrio cholerae in vitro*. The present work was undertaken with a view to finding out whether erythrose could inhibit the development of experimental cholera in rabbits. D-Erythrose was purchased from L. Light & Co. Ltd., Colnbrook, England, and used in these experiments.

A pathogenicity test was done with a known pathogenic strain of *V. cholerae* in the ligated intestinal loops of rabbits according to the procedure of De and Chatterje (1953). Approximately 3.75×10^7 viable vibrios were injected into the

Effect of erythrose on the gut-inflammatory reaction of *V. cholerae*. A, with erythrose; B, without erythrose.

intestinal loops of a rabbit, under ether anaesthesia, alone or together with 100 μ mol of erythrose in a final volume of 0.7 ml. of normal saline. The animals were sacrificed after 24 hours, and on examination it was found that the loop injected with a mixture of erythrose and vibrio culture did not show any gut-inflammatory reaction, while severe reaction was observed in the loop injected with the same dose of vibrio alone (see Fig.). It was interesting to note that viable vibrios could be isolated

from the loop injected with the mixture of vibrio and erythrose even after 24 hours, though there was no gut-inflammatory reaction.

The effect of erythrose on the experimental cholera in baby rabbits was also examined by the method of Dutta and Habbu (1955). In these experiments approximately 2×10^8 viable vibrios were injected into the proximal part of the small intestine of 8-day-old rabbits under light anaesthesia with or without 150 μ mol of erythrose in 0.5 ml. of normal saline. All the five animals which were injected with *V. cholerae* alone died within 24 hours, and post-mortem examination revealed congestion of the blood-vessels of the small intestine and distension of the large intestine with watery fluid. On the other hand, 9 out of 10 animals injected with *V. cholerae* and erythrose were found normal and alive the next day. Out of the nine surviving rabbits one rabbit was killed each day for nine days and their intestinal washings were put on culture plates for detection of viable vibrios. It is interesting to note that from the intestines of these animals killed up to the fourth day from injection viable vibrios could be isolated, even though there was no appreciable congestion of the small intestine or distension of the large intestine. From the fifth day and onwards viable vibrios could not be obtained from the intestine of those rabbits.

The failure to produce gut-inflammatory reaction in the ligated loops of small intestines of adult rabbits and congestion and distension respectively of the small and large intestines of baby rabbits may be attributed to the inhibitory effect of erythrose on the growth of *V. cholerae*, as has already been demonstrated in *in-vitro* experiments by Roy Chowdhury and Datta (1965). It appears, however, that erythrose has no vibriocidal action, since viable vibrios could be isolated from the gut even after 24 hours of injection of *V. cholerae* and erythrose into the intestine when the animals were still normal and alive.

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