MEDICAL MEMORANDA

Gall Stones after Peptic Ulcer Surgery

E. S. FIELD

British Medical Journal, 1971, 1, 708-709

The case of a man developing gall stones after two peptic ulcer operations and a review of 406 other cases of gallstones are presented.

St. James' Hospital, London S.W.12
E. S. FIELD, F.R.C.S., Surgical Registrar (Present position: Research Assistant (Honorary Senior Registrar), King's College Hospital Medical School, London S.E.5)

CASE REPORT

In 1961 a 60-year-old man presented with indigestion for 30 years; barium-meal examination showed duodenal ulceration. At operation anterior and posterior ulcers were found and a Polya-type gastrectomy was performed. The gall bladder was normal. In 1966 further digestive symptoms were investigated, and a stomal ulcer was found. Cholecystography showed nothing abnormal. At operation the normal gall bladder was confirmed and truncal vagotomy was performed for the ulcer. In 1967 still further indigestion occurred, and in 1968, after a cholecystogram showed a non-functioning gall bladder, cholecystectomy was performed for gall stones.

REVIEW OF PREVIOUS CASES

Altogether 406 patients found to have gall stones in the two-year period from 1 January 1965 to 31 December 1966 were reviewed. Of these 26 had undergone previous ulcer surgery, when the gall bladder had been noted to be normal. (Table I). The predominance of the Billroth I procedure among the

REFERENCES


The results for the remaining 13 patients are shown in the Table. Plasma salicylate levels were measured at three hours in 10 of the 13 patients and they ranged from 5 to 19 mg/100 ml, with a mean of 12 mg. There was no correlation between percentage change in clearance and the plasma salicylate level.

Discussion

Aspirin produces a significant reduction in glomerular filtration rate as measured by this method. Though there are many theoretical objections to a single-injection technique (Smith, 1951) it has been shown to correlate well with standard clearance procedures. Under normal conditions, Hypeaque clearance is excreted rapidly and completely by the kidney, is not taken up by other organs, and is not significantly protein bound. There is good evidence that Hypeaque clearance bears a constant relation to insulin clearance (Dennenberg, 1965; Donaldson, 1968). Furthermore, in preliminary studies we found that Hypeaque clearance by a single injection technique gave highly reproducible results, consecutive measurements of filtration rate varying by less than 5%. We believe that it is accurate and reproducible enough to detect acute changes in filtration rate and that it therefore lends itself to studies of this kind.

The way in which aspirin produces its effect on the plasma clearance of Hypeaque is unknown, nevertheless our results have important implications. In a technique which is becoming increasingly popular for following changes in glomerular filtration rate, it is obviously vital to know that this measurement can be altered by a single therapeutic dose of a drug as common as aspirin. It would be of interest to know if other commonly used drugs had similar actions. The possibility that aspirin may acutely affect renal function is also of interest in view of its possible role in the long-term nephrotoxicity of analgesic substances.

We thank Dr. J. D. Blainey for helpful criticism and encouragement.

REFERENCES

Acute Hypercalcaemia and Renal Failure after Antacid Therapy

D. N. S. MALONE, D. B. HORN

British Medical Journal, 1971, 1, 709–710

Intensive therapy with antacids, especially with calcium carbonate, is recognized as a cause of hypercalcaemia and also of the milk alkali syndrome. Attention has been drawn by Kiirnser (1964) to the occasional occurrence of a hypercalcaemic syndrome after the use of antacids. McMillan and Freeman (1965) pointed out the dangers of oral treatment with any calcium salt, and particularly the possibility of renal damage.

Case Report

In 1965 a 59-year-old retired farmer had a radiologically proved duodenal ulcer causing only minor symptoms of dyspepsia, which he controlled by self-medication with antacids. In August 1969 he developed severe dyspepsia after drinking a large amount of alcohol. The severity of the symptoms was such that he took large doses of antacid. He was referred to the medical unit.

The development of gall stones in a patient only two years after vagotomy was in keeping with the theory that the alteration of biliary tract dynamics by vagotomy might predispose to gall stones. The object of this review was to see whether, in fact, ulcer surgery might be a significant aetiological factor in cholelithiasis. Johnson and Boydens (1952), Cox et al. (1958), and Tinker and Cox (1969) noted alterations of gall-bladder physiology after vagotomy, and Wyatt (1969) noted changes after partial gastrectomy. After vagotomy there is an increased gall-bladder volume with increased emptying rate, the gall bladder becoming supersensitive to cholecystokinin.

Nielsen (1964) quoted four cases of gall stones within one year of vagotomy. Nobles (1966) found that 18% of patients undergoing vagotomy later required cholecystectomy. Maior and Suren (1947), however, found only 6 cases out of 394 in which ulcer surgery preceded gall stones. Chapa and Engel (1959) found that 7 out of 135 cholecystectomies followed within seven years of gastric resection. Griffiths and Holmes (1964) found 17 out of 238 patients with gall stones who had had Polya gastrectomy.

Peptic ulcer surgery preceded one in eight cholecystectomies in male patients but only 1 in 30 in females. Vagotomy is not apparently of significance. Cholecystography should be performed in all patients presenting with new indigestion some years after ulcer surgery.

I should like to thank the consultants of St. James' Hospital for permission to review patients under their care, particularly Mr. A. M. Desmond, Mr. N. C. Tanner, and Dr. J. B. Howells for help and encouragement. I am grateful to Mr. A. P. Wyatt for further help and advice.

References