As a measure of the safety of this procedure my personal series of vagotomy and antrectomy with gastro-duodenal anastomosis, starting in 1951, number over 250 with one death. There were also another 193 straight Billroth I procedures for duodenal ulcer requiring the same dissection and anastomosis, without a death, making a total of over 350 resections with gastro-duodenal anastomosis with one death. (My patients with gastric ulceration have not been so fortunate, largely due to embolism, coronary disease, and pneumonia.) Pyloroplasty with vagotomy is probably just as safe. There is a little, but not much, in the question of safety in a variety of procedures, though the stump in the Polya is a traditional danger.

The analysis of functional results in the series reported by Professor J. C. Goligher and his colleagues is really a comparison of three varieties of operation, all of which finish with the stomach joined to the jejunum, and the authors speculate as to whether fewer symptoms of alimentary dysfunction might not have been encountered if pyloroplasty had replaced gastro-enterostomy as a drainage operation, and if a Billroth I reconstruction had replaced that of a Polya after antrectomy, and they add that they are now considering these alternatives. Also, Dr. A. G. Cox and Dr. M. R. Bond in the same number of the *B.M.J.* (p. 460), in reporting on 100 patients four years after vagotomy and gastro-enterostomy, describe two cases of such troublesome diarrhoea cured by converting the anastomosis to a gastro-duodenal one, and they state that it would be of some interest to have corresponding data in a series of cases of vagotomy with pyloroplasty.

Here is one answer to both these queries: in 1959 I analysed the bowel function in a series of patients on whom I had performed vagotomy and antrectomy with gastro-duodenal anastomosis[1]—100 patients all operated on more than four years previously, a series exactly comparable in numbers and vintage to that of Cox and Bond. Resection of the pylorus and antrum is clearly a form of pyloroplasty—a very thorough one. Bowel function unchanged—41, and easier but once a day—37; i.e., 78 out of 100 unchanged or better (cf. Cox and Bond, with daily bowel function increased in 71); become constipated, as judged by the motion becoming hardened or no action for two or more days—11 (cf. Cox and Bond, tendency to constipation—5); occasional looseness or diarrhoea—11 (cf. Cox and Bond, episodic diarrhoea—23, transient diarrhoea—10).

An analysis of the 11 patients who gave any history of loose bowel function revealed: loose action one hour after a normal one—1; occasional looseness (1, 2, or 3 motions a day)—5; normal for a week, loose for a day, constipated for a day, then normal for a week—1; loose action for one day in 4 to 6 weeks—2; loose action for one day in 3 to 4 months—1; diarrhoea daily since dysentery in Jap P.O.W. camp—1. Only two of these patients were inconvenienced by their loose motions, whereas several expressed relief from disturbing constipation.

On this assessment it is evident that bowel function is better with the stomach draining into the duodenum rather than to the jejunum; and the cataract of diarrhoea (31%) in Mr. Harold Burge's assessment after vagotomy and pyloroplasty, now abolished he alleges by anterior selective vagotomy (*B.M.J.*, 7 March, p. 627), has not been found in this series nor in those patients in whom I have performed vagotomy and pyloroplasty only.

Recurrent ulceration after vagotomy and antrectomy and gastro-duodenal anastomosis has not been found in any patient in my series, and transatlantic agreement on the rarity of such recurrence is found in several such series cited by H. L. Harkins *et al.*,[2] who estimates it to be less than 0.5%, and the low recurrence rate in the Yorkshire analysis bears this out again, with only one suspected case in 126 patients in contrast to the higher rate by the other methods used. Harkins *et al.* also note a very low incidence of dumping, just as I have found, as well as plenty of room for good meals, and well-maintained weights. To my mind there is no longer any doubt about where the stomach should continue to drain after operation—into the duodenum. The present problem is whether vagotomy and pyloroplasty is sufficient to give a negligible recurrence rate and minimal dysfunction, or is the procedure better with an amputation of the antrum? What we need to know now is not where does the stomach go but how much goes, if any? As for basing an operation for duodenal ulcer on the present highly specialized, staff-consuming gastric analyses I have no faith. At the moment, as a rough plan, I am amputating the antrum with vagotomy in younger people and am doing pyloroplasty only with vagotomy in older people, and waiting with a mind still open in some directions.—I am, etc.,

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REFERENCES

1 Moloney, G. E., *Proc. roy. Soc. Med.*, 1959, **52**, 845.
2 Harkins, H. L., *et al.*, *Arch. Surg.*, 1960, **80**, 743.

Drug Register in Patients' Notes

SIR,—Though it is medically obligatory, and I imagine legally advisable, for any prescriber of drugs in hospital to take into account the patient's medication before admission and also any abnormal reactions to drugs, these facts are very rarely clearly stated in the hospital notes. This essential knowledge could be declared for all concerned to see if at the top of each prescription sheet, whatever its pattern, two "boxes" of sufficient size were headed "Drugs prior to admission" and "Abnormal reactions to drugs." It should further be made clear, either in print or by precept, that these spaces are never left blank, either a positive inquiry or "Not known" being inserted.

With the multiplication of drugs of surprising toxicity, this simple procedure should be of increasing practical significance, and would provide a permanent hospital record of especial use when patients are referred to other departments, and should be considered a vital communication to family doctors on the patient's discharge.—I am, etc.,

The Churchill Hospital, Oxford. C. GRIMSHAW.

Sulthiame Treatment of Epilepsy

SIR,—With reference to Drs. H. Garland and D. Sumner's paper on sulthiame in epilepsy (22 February, p. 474), while agreeing generally with their conclusions I would like to question their estimate of the severity of toxic side-effects.

By now I must have treated up to a 100 epileptics with "ospolot" (sulthiame), many of them for three years or more, and in three cases only had I to withdraw the drug because of side-effects, and then only because the side-effects were more important than the benefit the patient was deriving. In the three cases the patients complained of either nausea, lethargy, or ataxia.

One other interesting side-effect occurred in a woman of 32 whose temporal-lobe epilepsy and severe dysmenorrhoea began simultaneously five years previously, and neither the dysmenorrhoea nor epilepsy had been controlled to any great degree by standard medical treatment. On sulthiame the epileptic attacks, which were occurring at the rate of three a week, had ceased and at the same time the dysmenorrhoea cleared completely, but to her annoyance she became completely frigid. Fortunately her husband, when consulted, described her as having been much too active in bed anyway, and professed himself completely satisfied with the situation. In Dr. Garland's quotation from my paper he did not mention that in addition to its psychological effect I also found sulthiame an extremely efficient anticonvulsant in certain cases which were hitherto very resistant to any of the other analeptics.

It is true of course that sulthiame, while effective in some cases, is completely ineffective in other seemingly similar ones, and it may be that the main value of the drug would be in further elucidating our knowledge of the problem of the epilepsies; but in the meantime there is no reason why it should not be used as routinely as the hydantoins.—I am, etc.,

Tyrone and Fermanagh Hospital, Omagh, Co. Tyrone. T. HARAN.

SIR,—Drs. H. Garland and D. Sumner (22 February, p. 474) are a little too dogmatic about the place of sulthiame in the treatment of epilepsy. They state, "because of its side-effects, under no circumstances should sulthiame be used as the first drug in the treatment of any form of epilepsy." I would agree that it should not be used as the first drug of choice in grand mal or most forms of focal epilepsy. Sulthiame, however, is the only drug, other than steroids, which appears to be effective in a high proportion of patients suffering from myoclonic seizures (infantile spasms, lightning major seizures, salaam attacks). Because of the serious side-effects of the long-term administration of steroids in children I believe that sulthiame should always be given a trial in full dosage before steroids are prescribed for seizures of this type. Secondly, it must also be recognized that sulthiame is more effective in controlling the hyperkinetic behaviour of children suffering from the effects of temporal-lobe damage than other anti-epileptic drugs previously tried. It may be worth trying sulthiame initially in patients suffering from this type of behaviour disorder and withdrawing it if side-effects occur, rather than first prescribing some other anti-epileptic drug much less likely to be effective, such as primidone or a hydantoin.

In my experience of the drug, which is confined to its use in children under the age of 12 years, side-effects have been neither