all cases of long segment transplants involving reconstruction of the entire œsophagus for high strictures. No delay was encountered with short segment transplants.

Œsophageal reconstruction with left colon interposition permits reduction of the hernia, complete control of gastro-œsophageal reflux and fulfils the five basic criteria demanded of any satisfactory technique for œsophageal reconstruction.

Mr Norman C Tanner (*London*)
I agree with Mr Belsey that there is a very limited field for intermittent dilatation in the treatment of œsophageal stricture. Immediately after dilatation reflux followed by heartburn returns and a few days later the new granulation tissue lining the narrowed area fibroses and the stricture returns. However, in some very elderly people it is occasionally indicated. The late G Grey-Turner pointed out that in these circumstances sporadic dilatation, particularly under anæsthesia, is not as useful as daily gentle graduated autobouginage using warmed and well lubricated gum elastic bougies. It must be recognized too that, since increased reflux will follow successful dilatation, it is very important to combine dilatation with most careful medical management, particularly the sucking, ten or more times a day, of a non-absorbable alkali tablet to combat the acidity of the refluxed fluid.

I was surprised to hear that Mr Brain found œsophageal stricture so common after partial gastrectomy and after vagotomy; I would say it was an extremely rare event though I have seen cases. I believe it likely that none of my present and previous registrars have ever seen a case of œsophageal stricture following partial gastrectomy. After vagotomy we have, from the earliest days, practised careful repair of the phreno-œsophageal ligament; this may be the reason that our incidence of hiatus hernia and œsophageal stricturing after vagotomy has been very low. Nevertheless it must be recognized that there is a risk of hiatal weakness after vagotomy and stricture could follow.

We are anxious to learn every means of treating our patients and Mr Belsey has mentioned one method applicable to elderly people. I have found the following method useful in elderly people who have, in addition, chest disease, making it unsafe to open the thorax and unwise to do an upper abdominal operation. In such cases on three occasions we have carried out a laparotomy, mobilized the transverse colon as suggested by Mr Brain, pedicled on the left upper colic artery, then made a neck incision and transected the œsophagus; after ligaturing the lower cut end, an anastomosis was made between the œsophagus and colon above and the colon and stomach below. Because these people have had respiratory or cardiac disease we have made the colon by-pass subcutaneous: it is of course merely an extra-thoracic variation of the operation recommended by Mr Belsey and these cases have proved satisfactory.

With regard to the question of œsophagectomy for stricture with œsophagogastric reconstruction, the choice will lie between resection of much œsophagus and little stomach thus bringing the almost intact stomach high into the thorax or, alternatively, resecting very little œsophagus and much stomach, the upper two-thirds or so, and so having a low intrathoracic anastomosis; the advantage of the latter operation is that a good deal of the acid-secreting part of the stomach is removed. The late Dr Richard Sweet compared the two methods some years ago and decided in favour of low anastomosis. At that time I too practised this method in combination with pyloroplasty (Tanner 1951) but was rather disappointed by the limited food intake, the incidence of reflux and recurrent œsophageal ulceration. I think that most surgeons in this country would now prefer to resect little or no stomach and much œsophagus, so making an intrathoracic anastomosis about the aortic arch level, as it appears to have a lessened incidence of postoperative œsophagitis.

Mr Brain, with characteristic modesty, did not mention an operation which I have always known as the 'Brain operation'. This is the interposition of a jejunal loop between the œsophagus and gastric fundus after resection of a peptic œsophageal stricture. I do not use this operation myself but have found a variant very helpful, particularly in patients who have developed peptic œsophagitis after operations for cardiospasm. This is, in short, following local resection of the stricture, to make a Roux loop of jejunum which is anastomosed to the cut end of the œsophagus and then to make a side-to-side anastomosis between this Roux loop and the by-passed stomach. This brings some function back into the stomach and prevents late vitamin B_{12} deficiency. It also seems to be a very satisfactory operation from the point of view of the patient's comfort and nutrition.

REFERENCE
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