use of a surgical technique which could not adequately decompress the common channel (supraduodenal exploration with insertion of a T-tube).

The weight of evidence from three previous trials support the use of emergency ES in patients with severe acute pancreatitis due to gallstones irrespective of concomitant acute cholangitis or obstructive jaundice alone. This requires ES to be performed by properly trained personnel [7] and can only be of value if there is a high standard of overall management [1–6].

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Sclerotherapy or Banding for Oesophageal Varices?

ABSTRACT

Sarin, S. K., Govil, A., Jain, A. K., Guptan, R. C., Issar, S. K., Jain, M. and Murthy, N. S. (1997) Prospective randomised trial of endoscopic sclerotherapy versus variceal band ligation for oesophageal varices: influence on gastro-pathy, gastric varices and variceal recurrence. Journal of Hepatology, 26, 826–832.

Background/Aims: Endoscopic variceal ligation and endoscopic sclerotherapy are both recommended for the prevention of variceal rebleeding. To compare their efficacy, their influence on gastric varices and the development of portal gastropathy, 95 patients with variceal bleeding were studied.

Methods: The patients were randomized to receive weekly endoscopic sclerotherapy using alcohol (n = 48) or endoscopic variceal ligation (n = 47). The endoscopic sclerotherapy and endoscopic variceal ligation groups were comparable in etiology, severity of liver disease and grade of varices.

Results: In the arrest of acute bleed, endoscopic sclerotherapy and endoscopic variceal ligation were comparable (86% vs. 80%, p = ns). Endoscopic variceal ligation as compared to endoscopic sclerotherapy, obliterated esophageal varices in fewer sessions (4.1±1.2 vs. 5.2±1.3, p < 0.01) and a shorter time (4.4±1.3 vs. 6.9±3.4 wk, p < 0.01). Three (6.4%) patients bled after endoscopic variceal ligation and 10 (20.8%) after endoscopic sclerotherapy (p < 0.05). The actuarial percentage of variceal recurrence during a follow-up of 8.5±4.4 months, was higher after endoscopic variceal ligation than endoscopic sclerotherapy (28.7% vs. 7.5%, p < 0.05). Esophageal stricture formation after endoscopic sclerotherapy occurred in five (10.4%) patients, but in none after endoscopic variceal ligation. Significantly more patients developed gastropathy after endoscopic sclerotherapy than variceal ligation (20.5% vs. 2.3%; p = 0.02). Endoscopic sclerotherapy (52%) and endoscopic variceal ligation (59%) were equally effective in obliterating the lesser curve gastric varices. Six patients died: three in each group.

Conclusion: (i) Endoscopic sclerotherapy and endoscopic variceal ligation were equally effective in controlling acute bleed; (ii) endoscopic ligation achieved variceal obliteration faster and in fewer treatment sessions; (iii) endoscopic variceal ligation had a significantly lower rate of develop-
ment of portal gastropathy and rebleeding, (iv) while both
techniques influenced gastric varices equally, there was
significantly higher esophageal variceal recurrence after
endoscopic variceal ligation than sclerotherapy.

Keywords: oesophageal varices, variceal band ligation

PAPER DISCUSSION

Quite a few randomized trials and one meta-
analysis [1] have compared endoscopic
crotherapy with ligation for the treatment of
bleeding esophageal varices. The consensus
opinion is that banding ligation is associated
with fewer complications, requires fewer treat-
ment sessions to obliterate varices and probably
reduces rebleeding and mortality of these
patients. However, the vast majority of patients
in these studies underwent elective endoscopic
treatment. With the banding device loaded at the
tip of the endoscope, the view is restricted and
identification of the site of active bleeding might
be difficult. At the moment, there are very few
data on the success of banding ligation in
controlling acute bleeding varices.

The study by Sarin et al., compares endoscopic
injection of absolute alcohol with banding ligation
for esophageal varices. The authors are to be
commended on the study design and careful
documentation of clinical outcome parameters in
the follow-up, which include rebleeding epi-
sodes, recurrence of varices, development of
portal hypertensive gastropathy and gastric
varices after successful obliteration of varices. In
this study, only 12% of patients had active
bleeding from esophageal varices and bleeding
was successfully controlled in 80–85% by the two
deroscopic treatments. Varices were eradicated
after 4 sessions of banding ligation and 5 sessions
of alcohol injection. No serious complication was
reported except for esophageal structures in 5
patients receiving alcohol injections. The long-
term results were remarkable. Very few rebleed-
ing episodes have occurred and, in a mean
follow-up of 8 months, the mortality rates were
only 6.6–11.4%. However, it should be noted that
50% of patients in this study have Child’s A class
of liver disease and one-third of patients did not
have cirrhosis. Patients with hepatic encephalo-
pathy and renal impairment were excluded from
the trial. Since hepatic reserve is the most im-
portant determinant of the clinical outcome in pa-
ients with variceal hemorrhage, this study only
represents the results of the lower risk patients.

In this study, patients receiving endoscopic
banding ligation were found to have a higher
recurrence of varices but a lower rebleeding rate
compared to those receiving injection of alcohol.
The authors attributed the low frequency of
rebleeding to early obliteration of varices and
fewer deep ulcers formed after banding ligation.
Early recurrence of esophageal varices after
banding ligation has also been reported by
other workers [3]. Sarin proposed that the
development of recurrent varices is a result of
un-occluded perforator veins which allow com-
munication of blood between the para-esopha-
geal varices and the submucosal varices. Indeed,
bu using computerized tomography, Lin et al.,
showed that portal hypertensive patients with
large para-esophageal varices are associated
with higher rates of esophageal variceal recur-
rence and rebleeding after sclerotherapy [4]. We
followed a cohort of patients after banding
ligation by endosonography and have reported
a similar observation [5]. Theoretically, if these
perforators are sclerosed by injections at or
around the esophago-gastric junction, recur-
rence of varices may be reduced. So far, clinical
studies combining sclerotherapy with banding
ligation have not improved the short-term
results of banding ligation [6]. Whether the
combined therapy could prevent recurrence of
varices in the long run is still unknown.
While the safety of endoscopic banding ligation is largely undisputed, there is one major risk of this technique: esophageal perforation during insertion of the overtube. Perforation of the esophagus often occurs as a result of inability to relax the pharyngeal muscle by the patient and forceful insertion of the tube by the endoscopist. The development of multiple banding ligators (Speedband™ and Six-shooter™) in recent years has obviated the use of an overtube and is truly major advancement. Intubation is not more difficult with the endoscope loaded with these multiple band ligators and the procedure time is significantly shortened [7, 8]. Recently, a detachable mini-loop ligator has been developed and its use is currently under investigation.

I believe that endoscopic banding ligation will continue to gain popularity. Future development in this treatment modality should be directed to the prevention of recurrent varices formation, the improvement of multiple banding devices and the study of prophylactic banding ligation for selected cases with high risk of variceal bleeding.

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Leak after Whipple Resection: Preventable?

ABSTRACT

Howard, J. M. (1997) Pancreateojunostomy: Leakage is a preventable complication of the whipple resection. Journal of the American College of Surgeons; 184, 454–457.

Background: Leakage of the pancreateojunostal anastomosis has been a major complication after pancreatectoduodenectomy (Whipple operation), frequently reported in an incidence of 5 percent to 15 percent. The most widely used techniques of anastomosis have been variations of end-to-end pancreateojunostomy. Complicating 152 end-to-end anastomoses, done by me (including 98 for carcinoma of the pancreas or ampulla), were 5 pancreatic anastomotic leaks; the fifth patient died of this complication.

Study Design: The death resulting from a pancreatic anastomotic fistula led me to change my technique to an end of the pancreas to side of the jejunum, mucosa-to-mucosa, pancreateojunostomy (intubated), a modification of the technique described by Cattell and used since