

Endoscopic achievements in the upper gastrointestinal tract and small bowel

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Endoskopické výkony v horním trávicím traktu a tenkém střevě

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Obtaining hemostasis in the case of variceal bleeding (by binding, cyanoacrylate injection, etc.) remains of paramount importance, but equally relevant is the prevention of variceal rebleeding. First step in prevention concerns further attempts at complete eradication of oesophageal varices and β -blockade. Second step in the case of rebleeding is consideration of transjugular intrahepatic portosystemic shunt (TIPS). In an important multicenter study involving 72 patients TIPS were compared to repeat endotherapy, plus β -blockade. Median follow-up was 2 years. Following results were obtained for TIPS vs. endoscopy: rebleeding 0 vs. 29%, death 32 vs. 26%, and hepatic encephalopathy 35 vs. 14%. Based on these data, it would appear to be premature to give general recommendations for TIPS as secondary prophylaxis at this point in time. TIPS certainly reduced the rate of rebleeding but mortality was not altered (most patients died of liver failure, hepatocellular cancer and sepsis) and the rate of hepatic encephalopathy was significantly enhanced. It would therefore appear that currently TIPS remains the therapeutic intervention of last resort.

Detection of early neoplastic change in oesophageal columnar metaplasia (Barrett) remains tricky; beyond doubt if at all possible, a high definition endo-

scope and preferably acetic acid chromoscopy should be used routinely. Yet a distressing meta-analysis of 24 cohort studies of surveillance of patients with Barrett's oesophagus without carcinoma, with a minimum 3-year follow-up was published. Missed carcinoma (diagnosed within 1 year after negative index endoscopy) occurred in an appalling 25%. This figure is unacceptable and must be improved.

To determine the optimal technique for removal of neoplastic lesions in Barrett's oesophagus up to 20 mm in size, a prospective randomized comparison was carried out comparing

mucosal resection with a 16mm cap suck and cut technique, and submucosal dissection with the water-jet technique. Following items were analysed for resection vs. dissection expressed in patient numbers: R0 resection 2 vs. 10, severe adverse event 0 vs. 2, complete remission after 3 months 16 vs. 15, relapse after 2 years 0 vs. 1, need for elective surgery 3 vs. 4. Although dissection was superior to resection with respect to lateral R0 rate, the overall outcome was comparable. The authors therefore conclude that endoscopic (mucosal) resection with the suck and cut technique should remain



Fig. 1. Extensive duodenal adenoma.

Obr. 1. Rozsáhlý duodenální adenom.

the standard for most cancerous, early Barrett lesions.

Endoscopic resection with band-ligation of squamous cancers has now also been shown to be a fast, safe, efficient and cost-saving technique. Injection of botulinum toxin in such patients for prevention of oesophageal stricturing has been shown to decrease the stricture rate of 32% during placebo to 6% after botulinum.

Oesophageal food bolus impaction may well be increasing, perhaps due to rise in eosinophilic esophagitis. Attempts at endoscopic clearing of the food bolus (pushing through, fragmentation, etc.) is not without risk for mucosal damage and even perforation. Intravenous injection of 1–2 mg glucagon, usually given as monotherapy, in over 400 patients, resulted in 40% clinical success, defined as complete bolus passage or possibility of swallowing liquids. It may be worthwhile to try glucagon first, relaxing the muscle spasm, and proceed to endoscopy in case of failure.

Accurate delineation of the margins of early gastric cancer is of crucial importance before embarking on endoscopic removal. It has been shown in a prospective randomized trial of 130 lesions that correct cancer delineation was obtained in 90% with high magnification endoscopy + Narrow band imaging vs. 75% with indigocarmine chromoscopy. In Japan, delineation is also increasingly performed with magnification and imaging with blue laser light.

Bariatric surgery is currently the leading modality in the therapy of

morbid obesity and certainly surpasses the current endoscopic possibilities. Recently a systematic review and meta-analysis was published, of the use of the EndoBarrier. Well over 400 patients with body mass index (BMI) 30–49 kg/m² were analysed. An excess weight loss of 5 kg or a mean difference in body weight of 13% was obtained. However, up to 20% of the patients developed significant complications (such as ulceration at the gastric outlet) that further development of this procedure was stopped.

Intragastric balloons have already been available for several years. Recently a novel procedure less gastric balloon has been introduced. The balloon is folded inside a vegetarian capsule to facilitate swallowing; then the balloon is filled with 550 mL fluid after which the catheter is removed. The balloon remains *in situ* for 4 months during which a resorbable material inside the balloon degrades. After complete degradation, a release valve opens and the empty balloon passes through the gastrointestinal tract.

Thirty-four Japanese patients with a BMI of ~35 were analysed. Procedure less insertion was successful in all. Mean residence time was 117 days. Average weight loss was 10%. Quality of life improved despite adverse events; pain 25%, nausea 54% and vomiting 64% [1].

Resection of such large, laterally-spreading duodenal adenomas (Fig. 1) remains a major endoscopic challenge. Over 100 duodenal adenomas with a median diameter of 25 mm and in 27% larger than 40 mm were resected

with 10/15 mm snare; hemostasis was carried out with coagulation with the tip of the snare or with hot forceps. Complete resection was obtained in 96%. Intraprocedure bleeding occurred in 43%, especially in larger lesions; post-intervention bleeding in 15% of which 7% needed transfusion and 2% emergency angio/surgery; perforation occurred in 3% of which 2% required surgery. Remaining adenoma was seen in 14% after ~6 months. Overall 91% were adenoma free after a median follow-up of 2 years. From these results, one may conclude that even for large duodenal adenomas, endotherapy is the methodology of first choice. Endoscopic resection should be done in an experienced center with high endoscopic, radiological and surgical skills. The major complication is bleeding, increasing in parallel with the size of the lesion. Short term control, preferably at 3 months is essential to detect and retreat adenomatous remnants.

References

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