

## Endoscopic submucosal resection of small rectal carcinoid tumors

Rectal carcinoid tumors  $\leq 10$  mm in diameter have a very low rate of metastasis and are, therefore, good candidates for endoscopic resection—a less-invasive alternative to surgical resection. Nevertheless, complete resection is difficult because these tumors are generally located in the submucosal layer. Endoscopic submucosal resection with a ligation device (ESMR-L) was developed to improve complete resection rates and has recently been evaluated by Mashimo and colleagues.

This retrospective study included 61 patients—with 63 rectal carcinoid tumors estimated to be  $\leq 10$  mm and without atypical features—who had undergone ESMR-L. Complete resection status was determined by histopathology, and patients were monitored for local recurrence and distant metastases.

Complete resection was achieved for 60 (95.2%) tumors; the complete resection rate was higher for tumors in the lower rectum (58 of 59 tumors; 98.3%) than for those in the upper rectum or rectosigmoid colon (2 of 4 tumors; 50%)—although the small number of cases means this latter finding requires confirmation. Complications were uncommon, no cases of perforation and only five cases of minor bleeding occurred. In addition, no cases of local recurrence or distant metastasis were detected during follow-up (median 24 months).

The findings indicate that ESMR-L is an effective and safe procedure for resection of rectal carcinoid tumors  $\leq 10$  mm in diameter.

**Original article** Mashimo Y *et al.* (2008) Endoscopic submucosal resection with a ligation device is an effective and safe treatment for carcinoid tumors in the lower rectum. *J Gastroenterol Hepatol* 23: 218–221

## High prevalence of osteoporosis in children with Wilson's disease

Osteoporosis is a common complication of chronic liver disease. Although bone demineralization has been noted in Wilson's disease—which involves pathologic copper accumulation—the exact prevalence of osteopenia and osteoporosis in affected patients is unknown. Selimoglu *et al.* compared the bone mineral density (BMD) and bone mineral content (BMC) of children with Wilson's disease with those of

healthy controls matched for age and sex. The effect on BMD and BMC of standard therapies for Wilson's disease was also investigated.

The study included 31 children (10 girls) aged 2–16 years with Wilson's disease and 16 controls. Patients had significantly lower mean BMD, BMC and Z-scores (a measure of how far BMD deviates from normal) than controls: BMD 0.52 vs 0.72 ( $P=0.001$ ), BMC 19.27 vs 29.67 ( $P=0.009$ ), and Z-score  $-2.33$  vs  $-0.12$  ( $P=0.001$ ), respectively. The prevalence of osteopenia and osteoporosis was 22.6% and 67.7%, respectively, in children with Wilson's disease. Therapy with penicillamine (a copper chelator) and zinc (which inhibits copper absorption) had no effect on BMD or BMC after 1 year of treatment.

Most patients in the study had high renal tubular phosphate excretion and/or hypercalciuria. Copper deposition is thought to cause tubular dysfunction in Wilson's disease. The authors note that 2 years of penicillamine treatment are normally required for recovery of tubular function; continued penicillamine treatment might, therefore, eventually reduce bone mineral loss. Nevertheless, BMD screening and alternative antiosteoporosis therapies are needed for children with Wilson's disease.

**Original article** Selimoglu MA *et al.* (2008) Bone mineral density of children with Wilson disease: efficacy of penicillamine and zinc therapy. *J Clin Gastroenterol* 42: 194–198

## EUS-guided direct portal vein pressure measurement in pigs

Direct measurement of portal vein pressure is technically difficult and associated with a high risk of complications. Giday *et al.* now report successful direct measurement of portal vein pressure in five pigs by endoscopic ultrasound (EUS)-guided portal vein catheterization.

The intrahepatic portal vein was punctured with a 19-gauge needle under EUS and fluoroscopic guidance. The risk of bleeding was reduced by having the needle pass through at least 15 mm of liver tissue before entering the vein. An endoscopic retrograde cholangiopancreatography catheter was introduced over a guidewire into the portal vein, and portal venography was performed with iodinated contrast medium or CO<sub>2</sub>. The catheter was connected to a pressure monitor, and portal