CAPSULE ENDOSCOPY AS A PANENTERIC DIAGNOSTIC TOOL.

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The author offers a resumé of capsule endoscopy as a diagnostic modality in the gastro-intestinal tract. Capsule endoscopy (CE) was first described in 2000 and is possibly one of the most important advances in gastro-intestinal diagnostics, since the introduction of endoscopy as a diagnostic modality. The swallowed pill camera shows images, as it is propagated through the gastro-intestinal tract by peristalsis. These images are converted to a computerised video format. The initial model of capsule endoscopy was designed to examine the small intestine only, thereby superceding flexible enteroscopy with its technical difficulties, and in certain instances is regarded as the choice modality for imaging the small bowel. The commonest indication for small bowel CE is GI bleeding, which may be either occult or overt, the investigation performed after inconclusive upper and lower gastro-intestinal endoscopic procedures. Studies have shown that CE identifies pathology in 45-60% of these patients, and is more sensitive than small bowel barium contrast studies, CT, MRI, push enteroscopy and angiography. Flat vascular lesions (angioectasias) and inflammatory conditions are the commonest diagnoses. Small intestine tumours are reported in up to 9.6% of CE examinations performed to investigate obscure gastro-intestinal bleeding. The malignancies encountered include gastro-intestinal stromal tumours, adenocarcinoma, carcinoid and lymphoma. The common benign entities include haemangiomas, adenomas and lipomas. Metastatic lesions with regard to melanoma, lung, renal and breast primary cancers are encountered. The major limitation of CE is that submucosal lesions maybe left undetected. The main risk of CE is capsule retention occurring in 1% of patients with suspected bleeding, and as frequently as 5-13% of patients with Crohn’s disease.

The author describes the advances which have occurred with capsule endoscopy including extrapolation to oesophageal CE, and a double-headed capsule has been developed to assess the colon. This capsule is able to detect lesions on both sides of haustral folds. Recent multicentre trials suggest the newer colon capsules have an improved sensitivity in detecting polyps greater than 6mm in diameter, with a rate of accuracy between 85 and 90%. The authors indicate that the CE may supercede virtual colonoscopy in patients unsuitable for routine endoscopic procedures.

The authors have outlined that it is now possible to visualise the entire gastro-intestinal tract using CE with a single capsule. The future may hold the possibility of tissue sampling and therapeutic CE with the further development of technology.