

## *PRESS RELEASE*

### **Perforation complications in endoscopy: are they avoidable?**

**(Barcelona, 25 October 2010) Endoscopic complications such as perforation will inevitably occur if an endoscopist undertakes a large number of procedures. The risk of perforation is typically higher in operative procedures than in purely diagnostic ones. However, as Prof. Guido Costamagna from the Catholic University of Rome in Italy explained at the 18th United European Gastroenterology Week (UEGW) in Barcelona, the burden of such complications can be greatly reduced if a few simple principles are applied.**

“There are three main ways to reduce the burden of perforation resulting from operative endoscopy: improved training – particularly for advanced therapeutic procedures – respecting the indications for each procedure in each patient, and the early recognition and prompt management of any complications,” Prof. Costamagna told the meeting.

#### **Perforations of the upper GI tract: act swiftly to save lives**

The risk of perforation of the upper gastrointestinal (GI) tract due to diagnostic endoscopy is relatively low, with perforation occurring in 0.6% of all procedures. The risk increases significantly with operative procedures, with studies suggesting around 6% of procedures are associated with perforation complications. Risk factors associated with perforation include the presence of anterior cervical osteophytes, Zenker’s diverticulum, oesophageal strictures and malignancies.

“Acute perforations of the oesophagus can be life-threatening and must be managed aggressively to reduce mortality and prevent additional complications,” said Prof. Costamagna. “A multidisciplinary approach is needed that involves surgeons, endoscopists, interventional radiologists and intensive care specialists.” According to Prof. Costamagna, there are three important goals when treating patients with oesophageal perforation: preventing ongoing soilage, providing debridement of devitalised tissues, and performing wide drainage. Endoscopic clips are currently the only devices on the market for closure of perforations, however, he said, these can be highly effective and significantly reduce the need for surgery when they are used to close linear or regularly-shaped perforations of less than 2cm.

“There are a number of novel techniques currently in development for the treatment of irregular perforations or deep-penetrating lacerations of the oesophageal wall,” he told journalists. “These include a powerful nitinol over-the-

scope clipping system, sewing devices, and the use of covered stents that help to stimulate tissue regeneration.”

### **Perforations of the colon: conservative management may be appropriate**

Colonic perforation during colonoscopy can result from mechanical forces against the bowel wall, barotraumas, or as a direct result of therapeutic procedures. Studies have yielded conflicting results in terms of the relative risk of perforations associated with diagnostic *versus* therapeutic (e.g. polypectomy) colonoscopies, however, a large survey of over 25,000 diagnostic colonoscopies suggested a perforation rate of 0.2%. In the same survey, polypectomy was performed in over 6,000 patients and was associated with a 0.32% rate of perforation.

Prof. Costamagna believes that, in the event of a colonic perforation, a surgical consultation should always be sought. “Although colonic perforations often require surgical repair, non-surgical management may be appropriate for certain patients,” he said. Patients with silent perforations or those with localised peritonitis without signs of sepsis that continue to improve with conservative management may avoid surgery altogether. Patients with “mini-perforations” can be managed with bowel rest, intravenous antibiotics, and frequent serial examinations to monitor for clinical deterioration. Although clipping devices had been used successfully to close colonic perforations, Prof. Costamagna suggested their use was not yet universally accepted.

### **Assess the risk: benefit ratio to improve clinical outcomes**

Although endoscopic complications such as perforation are relatively rare, they are also inevitable given the widespread use of endoscopy as a diagnostic and therapeutic procedure. Prof. Costamagna urged clinicians to consider carefully the risks and benefits of each procedure in each patient in order to improve clinical outcomes and minimise risk.

“Clearly, avoiding complications must be a primary goal for every endoscopist”, he said. “The importance of dedicated training programmes cannot be over-emphasised, as new endoscopic technologies emerge and new treatments for perforation become available.”

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