

## TUMOR VS NON-TUMOR ORIGIN OF OCCULT AND OBSCURE GASTROINTESTINAL BLEEDING REQUIRING HOSPITALIZATION

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**Aims and background:** Occult/obscure gastrointestinal bleeding is often problematic to diagnose. It often leads to delayed treatment, a particularly dangerous circumstance when tumor origins are involved. This study reports the six-year experience of an Italian Surgery Center in the identification of the nature (tumor *versus* non tumor) and site of origin (upper, middle, lower gastrointestinal tract) of occult/obscure bleeding requiring hospitalization, as well as in its treatment.

**Methods:** Diagnostic instrumental examinations employed were: esophagogastroduodenoscopy, rectocolonoscopy, computerized tomography small bowel follow-through examination, capsule endoscopy, biopsy, angiography, abdominal computerized tomography scans and ultrasound. Therapies included: interventional radiology and surgery.

**Results:** Thirty-five cases of obscure and 27 cases of occult bleeding were examined; all received a definite diagnosis during hospitalization. In the cases with obscure bleeding the diagnosis was inflammatory bowel disease (n = 7), angiodysplasia (5 gastric, 2 duodenal, 2 jejunal, 3 ileal, 4 right colon), small bowel tumors (4 non-Hodgkin lymphomas, 1 leiomyoma, 6 adenocarcinomas), and gastric metaplasia of Meckel's diver-

ticulum (n = 1). There were significantly more nontumor lesions than tumors ( $P < 0.005$ ), and a middle tract source was significantly more frequent than upper/lower tract sources ( $P < 0.0001$ ). Intestinal resections were performed for all small bowel tumors (8 laparotomic, 3 laparoscopic), 5 angiodysplasias, all cases of inflammatory bowel disease and gastric metaplasia of Meckel's diverticulum; arterial embolization was performed for 11 angiodysplasias. In the cases with occult bleeding the diagnosis was sigmoid colon polyps in 6 (treatment, endoscopic polypectomy) and right colon cancer in 21 (treatment, right hemicolectomy). There were significantly more tumors than nontumor lesions ( $P < 0.0001$ ); all derived from the lower gastrointestinal tract. In all cases, the interventions resolved the bleeding completely.

**Conclusions:** The results show that more than 50% of cases with obscure/occult bleeding requiring hospitalization are motivated by malignant gastrointestinal tumors, 34% of which are located in the small bowel, usually a difficult tract to explore. Thanks to modern technology, however, their diagnosis and treatment can nowadays be promptly and successfully achieved.

**Key words:** diagnosis, occult/obscure gastrointestinal bleeding, therapy, tumor and nontumor lesions.