

Ann Surg. 2004 Nov;240(5):757-73.

Resolved and unresolved controversies in the surgical management of patients with Zollinger-Ellison syndrome.

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OBJECTIVE: Highlight unresolved controversies in the management of Zollinger-Ellison syndrome (ZES). **SUMMARY BACKGROUND DATA:** Recent studies have resolved some of the previous controversies including the surgical cure rate in patients with and without Multiple Endocrine Neoplasia-type1 (MEN1), the biological behavior of duodenal and pancreatic gastrinomas, role of imaging studies to localize tumor, and gastrectomy to manage acid output. **METHODS:** Review of the literature based on computer searches in Index Medicus, Pubmed and Ovid. **RESULTS:** Current controversies as identified in the literature include the role of endoscopic ultrasound (EUS), surgery in ZES patients with MEN1, pancreaticoduodenectomy (Whipple procedure), lymph node primary gastrinoma, parietal cell vagotomy, reoperation and surgery for metastatic tumor, and the use of minimally invasive surgical techniques to localize and remove gastrinoma. **CONCLUSIONS:** It is hoped that future studies will focus on these issues to improve the surgical management of ZES patients.