

## Question 28 – Week of May 17

70-year-old woman had upper endoscopy for evaluation of anemia. She was found to have a 2cms nodule in the greater curvature. Deep biopsy of the lesion was suggestive of carcinoid tumor. There were no other nodules or polyps in the stomach or duodenum. Which of the following statements is true.

- A. This is a typical carcinoid lesion seen in association with atrophic gastritis and/or pernicious anemia.
- B. Zollinger-Ellison syndrome is the most common cause of gastric carcinoids.
- C. This lesion has increased risk of hepatic metastasis and development of carcinoid syndrome.
- D. This lesion will likely respond to antrectomy.
- E. Serum gastrin level will likely be elevated.

**Answer: C**

Gastric carcinoids can be classified into three types. Type I is the most common (70-80% cases), occurring in patients with atrophic gastritis and pernicious anemia as a result of secondary hypergastrinemia. These are usually small (<1cm), multiple and appear as nodules or polyps in the stomach and mostly having a benign indolent course. Type II is similar phenotypically but occurs from primary hypergastrinemia (MEN I or Zollinger –Ellison) and also has benign indolent course. Type III is the sporadic carcinoid, which is usually a single, large (> 2cms) polyp or nodule in the stomach. These tend to have poorer prognosis and have up to 65% chance of hepatic metastasis at presentation; as a consequence may also present with carcinoid syndrome. They occur in absence of primary or secondary hypergastrinemia hence do not respond to antrectomy.

### References:

1. Dakin, GF, Warner, RR, Pomp, A, et al. Presentation, treatment, and outcome of type 1 gastric carcinoid tumors. *J Surg Oncol* 2006; 93:368.
2. Rindi, G, Bordi, C, Rappel, S, et al. Gastric carcinoids and neuroendocrine carcinomas: Pathogenesis, pathology, and behavior. *World J Surg* 1996; 20:168.
3. Gilligan, CJ, Lawton, GP, Tang, LH, et al. Gastric carcinoid tumors: The biology and therapy of an enigmatic and controversial lesion. *Am J Gastroenterol* 1995; 90:338.
4. Hirschowitz, BI, Griffith, J, Pellegrin, D, Cummings, OW. Rapid regression of enterochromaffin like cell gastric carcinoids in pernicious anemia after antrectomy. *Gastroenterology* 1992; 102:1409.