Segmental Resection of Duodenal Adenocarcinoma: Case Report

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Abstract

Primary malignant tumors of the duodenum represent 0.3% of all gastro-intestinal tract tumors but up to 50% of small bowel malignancies. Primary malignant tumors of the duodenum must be differentiated from malignant tumors of the ampulla, pancreas and common bile duct. The most frequent tumor of the duodenum is Adenocarcinoma [1,2]. Other primary tumors are lymphomas, leiomyosarcomas, carcinoid tumors, gastrinomas, and stromal tumors. Adenocarcinoma of the duodenum may arise from duodenal polyps observed in familial polyposis or Gardner’s syndrome, or be associated with celiac disease [3,4]. The tumor can be located in any part of the duodenum but the most frequent location is the second part. Malignant tumors of the duodenum are observed with the same frequency in men and women. The peak of frequency is the sixth decade, although the disease may develop in younger patients. Signs and symptoms are non specific. The main symptoms are: abdominal pain (15 to 60% of patients), weight loss (30 to 59%), nausea and vomiting (25 to 30%), jaundice (20 to 30%), hemorrhage (10 to 38%). A palpable abdominal mass is found in less than 5% of the patients [5].

Case presentation

50-year-old women presented with an acute attack of vomiting endoscopy done and the cause was found to be a sub mucosal tumor located in the third part III of the duodenum, 5 cm distal of the papilla of Vater. An emergency laparotomy after admission and correction of fluid and electrolyte was done. Ligation of tumor-feeding vessels with primary, definitive surgical therapy was performed by partial resection of the duodenum with a duodenojejunostomy. Feeding jejunostomy was done also to supply enteral feeding postoperative. Histology revealed an Adenocarcinoma with a diameter of 2.5 cm after that the patient recover smoothly and went home after 10 days to be followed on outpatient basis [6-8].

Conclusion

Tumors of the duodenum are a rare cause of upper gastrointestinal obstruction. Partial resection of the duodenum is a warranted alternative to a duodenopancreatectomy, as this procedure has a lower operative morbidity, while providing comparable oncological results [9-12].

Figure 1.

Primary malignant tumor of the duodenum is a very rare cancer and is observed with the same frequency in men and women.
the peak of frequency is the sixth decade, although the disease may develop in younger patients. Signs and symptoms are non specific [13,14]. The main symptoms are: abdominal pain (15 to 60% of patients), weight loss (30 to 59%), nausea and vomiting (25 to 30%), jaundice (20 to 30%), hemorrhage (10 to 38%) (Figures 1-5).

A palpable abdominal mass is found in less than 5% of the patients. The diagnosis is with many diagnostic methods such as Barium studies of the upper intestinal tract which had been replaced by fiber optic endoscopy. Barium examination show in most cases an irregular stricture of the duodenum, but can be normal or misleading. Fiber optic endoscopy allows a precise location of the tumor and endoscopic biopsies which confirm the diagnosis [15-18]. The Preoperative staging is not easy and No study has evaluated the best method of preoperative staging of malignant lesions of the duodenum. Some authors use ultrasonography for the diagnosis of liver metastases; the accuracy of CT scan, MRI and angiography have not been studied. These investigations are not performed routinely, most of the patients being operated on as only for a palliative procedure.

Endoscopic ultrasonography has been reported to be useful for the preoperative staging of ampullary and pancreatic carcinomas. No study reports its accuracy in the preoperative evaluation of malignant duodenal tumors. Five to 40% of the patients have distant metastases or peritoneal seeding at the time of diagnosis [6]. The treatment of such cases is not yet very clear with guidelines and due to the low incidence of the disease there is no randomized study comparing different types of treatment. Complete surgical resection is the only hope for cure. Two types of surgical resection are available: pancreatoduodenectomy associated with various types of lymphadenectomies or segmental resections [7,8]. Pancreatoduodenectomy has been advocated as the surgical procedure of choice because it offers the possibility of regional lymph node resection. Nonetheless good long-term results have been observed with segmental resection, particularly for tumors of the distal part of the duodenum [9]. When local extension or metastatic disease precludes curative resection, palliative procedures such as gastrojejunostomy and gastrojejunal anastomosis can be performed [19,20]. Laser photo coagulation has been proposed for patients unfit for surgery with good palliation on hemorrhage and obstructive symptoms.

References
1. MG Hurtuk, S Devata, KM Brown, K Oshima, GV Aranha, et al. (2007) Should all patients with duodenal adenocarcinoma be considered for
aggressive surgical resection? American Journal of Surgery 193(3): 319-324.
2. Y Nakayama, K Kadowaki, N Nagata, H Itoh, Y Hinno (2000) Depressed type early duodenal cancer: A case report Japanese Journal of Gastroenterological Surgery 33(4): 477-481.
3. Abmark A Andersson, A Lasson (1980) Primary carcinoma of the duodenum. Annals of Surgery 191(1): 13-18.
4. IA Spira, A Ghazi, WI Wolff (1977) Primary Adenocarcinoma of the duodenum Cancer 39(4): 1721-1726.
5. K Ouriel, JT Adams (1984) Adenocarcinoma of the small intestine. American Journal of Surgery 147 (1): 66-71.
6. MINT Vincent (1961) Primary carcinoma of the duodenum. American Surgeon 27: 744-750.
7. JD Cunningham, R Aleali, M Aleali, ST Brower, AH Aufses (1997) Malignant small bowel neoplasms: histopathologic determinants of recurrence and survival Annals of Surgery 225(3): 300-306.
8. R Delcore, JH Thomas, J Forster, AS Hermreck (1993) Improving resectability and survival in patients with primary duodenal carcinoma. American Journal of Surgery 166(6): 626-630.
9. Martin GM (1986) malignant tumors of the small intestine. Surg Clin North Am 6: 779-785.
10. Mittal VK, Bodzin JH (1980) Primary malignant tumors of the small bowel. Am J Surg 140(3): 396-399.
11. Miles RM, Crawford D, Duras S (1978) the small bowel tumor problem: an assessment based on 20-year experience with 116 cases. Ann Surg 189(6): 732-740.
12. Brucher BLDM, Roder JD, Fink U, Stein HJ, Busch R, et al. (1998) Prognostic factors in resected small bowel tumors. Dig Surg 15(1): 42-51.
13. Brucher BLDM, Stein HJ, Roder JD, Busch R, Fink U, et al. (2001) new aspects of prognostic factors in adenocarcinomas of the small bowel. Hepato-Gastroenterology 48(39): 727-732.
14. Delcore R, Thomas JH, Forster J, Hermreck AS (1993) Improving respectability and survival in patients with primary duodenal carcinoma. Am J Surg 166: 626-631.
15. Maglinte DDT, O Connor K, Bessette J, Chernish SM, Kelvin FM (1991) The role of the physician in the late diagnosis of primary malignant tumors of the small intestine. Am J Gastroenterol 86(3): 304-308.
16. Cicarelli O, Welch JP, Kent GG (1987) Primary malignant tumors of the small bowel: the Hartford hospital experience, 1969-1983. Am J Surg 153(4): 350-354.
17. Darling RC, Welch CE (1959) Tumors of the small intestine. New Engl J Med 260: 397-408.
18. Wilson JM, Melvin DB, Gray GF, Thorbjarnarson B (1974) Primary malignancies of the small bowel: a report of 96 cases and review of the literature. Ann Surg 180(2): 175-179.
19. Norberg KA, Emas S (1981) Primary tumors of the small intestine. Am J Surg 142(5): 569-573.
20. Ehert P, Zuidema GD (1965) Primary tumors of the small intestine. Arch Surg 91: 452-455.