Available online at www.scientiaresearchlibrary.com

Scientia Research Library

ISSN 2348-0416
USA CODEN: JASRHB

Journal of Applied Science And Research, 2017, 5 (5):32-37

(*http://www.scientiaresearchlibrary.com/arhcive.php*)

Surgical treatment of duodenal adenocarcinoma in 2 cases

D. Erguibi1*, A. Nouri1, R. Boufettal1, S.R. Jai 1And F. Chehab1. H. Tabakh2, N. Touil2, O. Kacimi2, N. Chikhaoui2

1 Service de chirurgie viscérale Aile III, Centre hospitalo-universitaire Ibn Rochd, Casablanca, Maroc.

2 Service de radiologie, Centre hospitalo-universitaire Ibn Rochd Casablanca, Faculté de médecine et de pharmacie Casablanca, Université Hassan II Casablanca MAROC.

ABSTRACT

The adenocarcinoma of the duodenum is a rare malignant tumor, its diagnosis is often delayed due to clinical latency. The diagnosis is based on endoscopy and the anatomatomopathological study, while ultrasound and computed tomography allow the assessment of extension. The treatment is essentially surgical.We report a retrospective study of two cases of adenocarcinoma of the duodenum hospitalized in the department of general surgery (wing3) of CHU IBNO ROCHD CASABLANCA during a period from 2007 to 2013 in order to determine the epidemiological, diagnostic, therapeutic and evolutionary profile of the " adenocarcinoma of the duodenum.The age of our patients is 37 years and 61 years, both patients were male. Clinical symptomatology is nonspecific, dominated by high digestive stenosis. Oesogastroduodenal fibroscopy with biopsy confirmed the diagnosis. One of our patients has benefited from a cephalic duodenopancreatectomy and the other from a gastro-jejunal derivation. The evolution is marked by the improvement of the general condition of the 1st and the death of the 2nd after a decline of 14 months. The prognosis of this disease is related to the extent of the tumor and the type of treatment. Improved survival is dependent on early diagnosis and radical surgery.

Keywords: duodenal adenocarcinoma, Cephalic duodenopancreactectomy, Prognosis.

INTRODUCTION

Primary adenocarcinoma of the duodenum is a rare tumor, accounting for less than 0.5% of gastrointestinal cancers, although it is the most common tumor of the small intestine.

The diagnosis is often delayed because of the clinical latency of the tumor, it is based on the histological analysis of a biopsy or an operative specimen. The prognosis is poor, the improvement of the survival is dependent on an early diagnosis and a radical surgery.

From two cases collected at the Wing III Surgical Department at the Casablanca University Hospital Center spread between January 2007 and January 2013 and a literature review, we show the diagnostic, therapeutic and prognostic aspect of this pathology.

MATERIAL AND METHODS

CASE-1

A 61-year-old patient, with no history of a particular pathological condition, who has been exposed for one-and-a-half months prior to admission to epigastralgia with a progressive, burn-type, emesis-relieved epigastric system, accompanied by four episodes of low-abundance melena, without jaundice without other symptoms. sign the whole evolving in context of apyrexia and alteration of general state.

The clinical examination is peculiar except for a conjunctival pallor.

Esophagogastroduodenal fibroscopy was performed showing a budding tumor aspect of the second duodenum, the pathological examination is a moderately invasive Lieberkuhnian adenocarcinoma.

The pelvic abdominal CT showed a parietal thickening of the lower part of the second duodenum, above the papilla, infiltrated by a heterogeneous process of 28X23 mm, invading the lower part of the pancreas head. This process continued at the level of the genus inferior to the third duodenum, without invasion of the peridudenal fat. The liver was normal in size and appearance, no dilatation of the intra and extra-hepatic bile ducts, no detectable lymphadenopathy, and no peritoneal effusion (Figure 1).

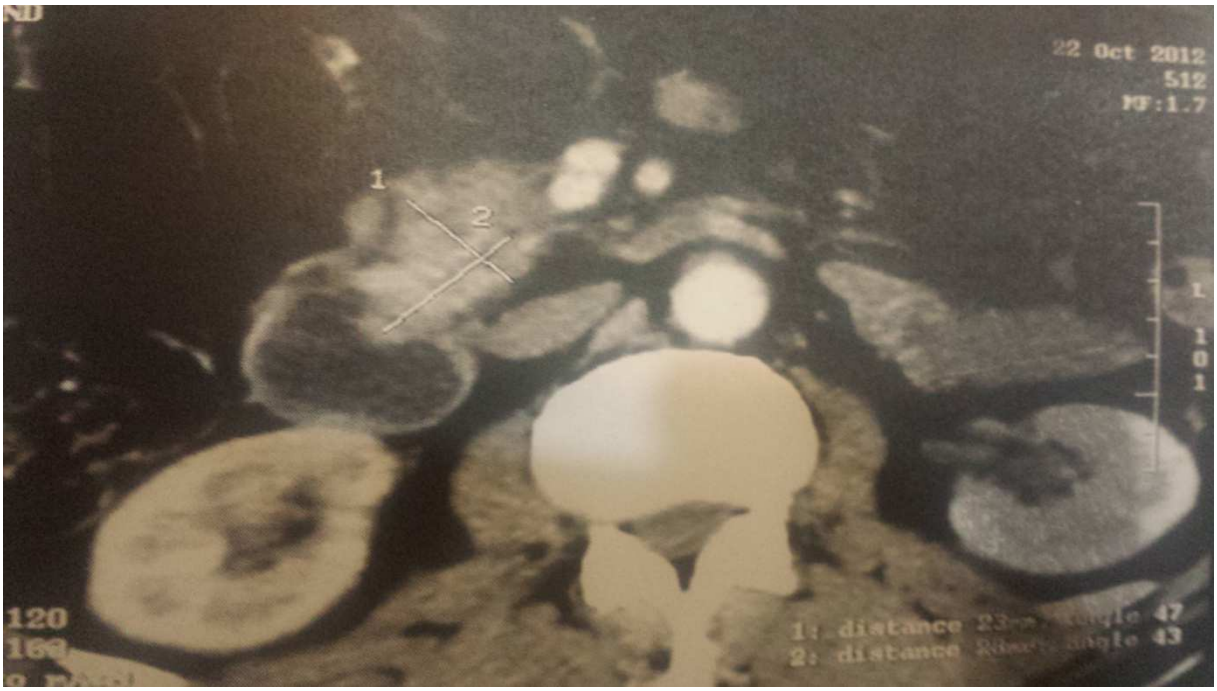

Fig1: Abdominal tomodensimetry showing a tumoral process of the lower part of the 2nd duodenum.

The patient's file was discussed in a multidisciplinary consultation meeting where a surgical intervention was decided. Surgical exploration showed a tumor of the second duodenum and third duodenum about 4 to 5 cm long, invading the head of the pancreas, adhering intimately to the right side of the root of the transverse mesocolon, with the presence of a nodule peritoneal carcinomatosis of 2 mm on the external surface of the 2nd duodenum, without hepatic metastases or ascites. A cephalic duodenopancreatectomy was performed with a biliodigestive continuity recovery according to Child. The immediate post-operative follow-up was marked by a biliary leakage of approximately 500 cc / day, with a gradual decrease in flow rate until postoperative dry-down.

Histopathological analysis showed a well-differentiated and invasive duodenal adenocarcinoma, parietal wall measuring 6 cm long axis extending to the duodenal papilla, infiltrating pancreas with periacal engrainings and presence of vascular emboli, without lymph node metastases. The tumor is classified PT4N0.

The patient received 4 courses of chemotherapy with 5 fluorouracil, oxaplatin and capecitabine with good tolerance. The control scanner is peculiar, with good clinical and biological evolution.

CASE-2

Patient 37 years old, having a father who died 13 years ago of a metastatic gastric tumor from the outset, present since 3 months before his hospitalization, bile vomiting postprandial late, without jaundice nor externalized gastrointestinal bleeding all evolving in context of apyrexia and general state preservation. The examination is without particularity. Oesogastro duodenal fibroscopy revealed a friable and haemorrhagic tumor proliferation at the level of the 3rd duodenum, histological examination revealed a poorly differentiated and infiltrating adenocarcinoma. The transit showed a tight stenosis of the third portion of the duodenum of irregular and eccentric appearance, containing a small lacunary image responsible for a dilation of the upstream segment.

Pelvic abdominal CT showed a tumor process measuring 24X23mm at the 3rd duodenum, pushing the head of the pancreas forward which was slightly increased in size, with no detectable canal dilation. It infiltrated the inferior vena cava, the superior mesenteric vein which is probably thrombosed, without detectable deep lymphadenopathies (Figure 2).

Surgical exploration showed a fixed third duodenum tumor invading the superior mesenteric artery and Henle's gastrocolic trunk. We carried out a gastrojejunal bypass trans and isosperiosteal mesocolic with drainage under hepatic drainage of Redon. The postoperative consequences were without particularities.

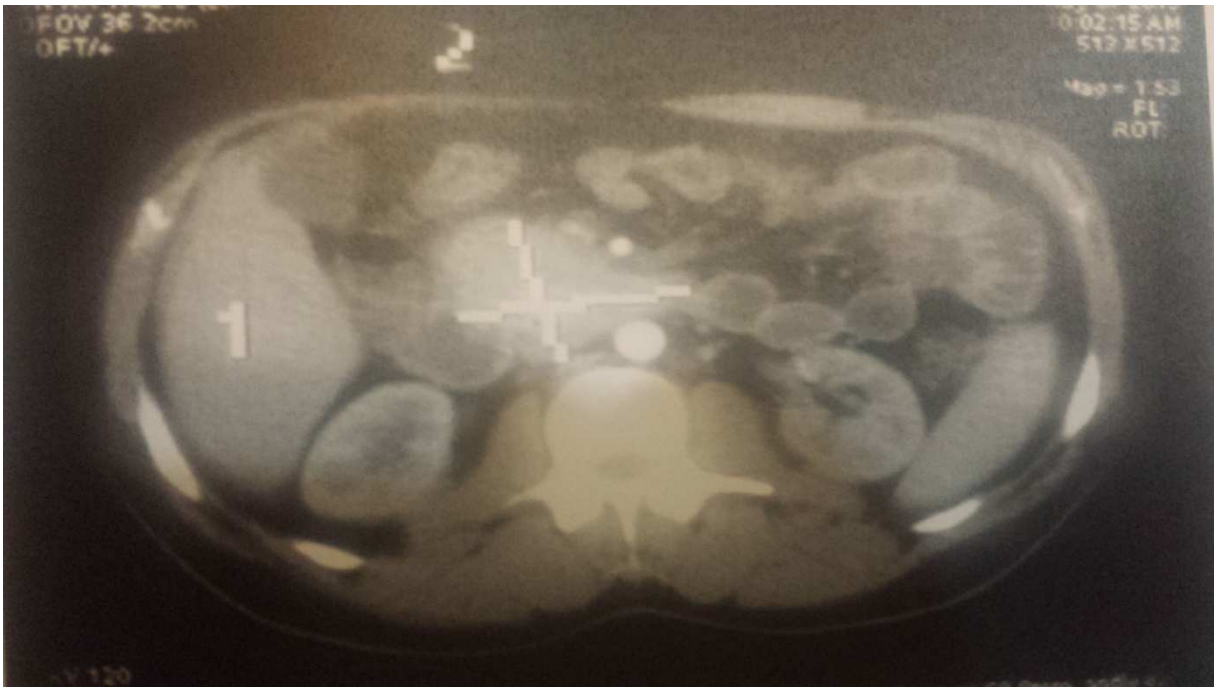

Fig 2: tomodensimetry showing a tumoral process of the 3rd duodenum.

The patient received 3 chemotherapy courses based on 5 fluorouracil, oxaplatin and folinic acid, with almost stabilization of the abdominal mass at the control CT. A change of protocol was decided: 3 courses of chemotherapy based on fluorouracil, irinotecan and folinic acid. A control CT

showed the progression of the duodenal tumor measuring 5.7x6.9 cm in diameter and a stasis stomach, associated with infiltration of adjacent fat and presence of mesenteric lymphadenopathy. After the 3rd course of treatment, the patient presented mucosal cutaneous jaundice with dark urine and discolored stools, a syndrome of biological cholestasis, hepatic cytolysis and dilation of the intra and extrahepatic bile ducts on ultrasound.

A surgical reoperation was decided in multidisciplinary consultation meeting, but it was not performed due to the deterioration of the general condition of the patient who died at home, the decline is 14 months.

RESULT AND DISCUSSION

Duodenal adenocarcinoma is a rare malignant tumor that accounts for 0.3% to 0.4% of gastrointestinal tumors. This organ is the site of between 45% and 55% of small cancers according to Lee, and 55 - 82% according to Aparicio et al. It can occur at any age with extreme between 23 and 100 years (1), exceptional in children only one case is described by Lemoine (2) in a child of 9 years.

It is a pathology that affects both sexes with a slight male predominance (3), the sex ratio varies between 1 and 2. The second duodenum is the preferred seat of duodenal adenocarcinoma (3). The extension is deep in the different planes of the duodenal wall, from the mucosa to the serosa, the duodenal perioral fat and to the neighboring organs towards the bilio-pancreatic junction, and the vascular structures of the region. The ganglionic extension is early and frequent, especially towards the adjacent lymph nodes (3). Metastases are rare and late, occur to the liver, lungs and bone. Peritoneal carcinomatosis and cerebral metastases are rare (3). In our study, the tumor invaded the superior mesenteric artery in one patient.

The clinical symptomatology is variable and nonspecific, dominated by abdominal pain, vomiting and weight loss (4). Digestive upper gastrointestinal bleeding rarely accompanies duodenal adenocarcinoma (4), which is the case of one of our patients. Diarrhea is described in rare duodenal villous tumors (3). The deterioration of the general state is represented by asthenia, anorexia and slimming, the latter is generally rapid and important increased by vomiting and / or anemia (3). Jaundice is a sign of locoregional extension of the tumor that may be early. The clinical examination is usually poor, rarely, it shows signs of high digestive stenosis, signs of cholestasis or abdominal mass, which explains the delayed diagnosis and the nonspecificity of the symptoms. In our study, the time of diagnosis is between one and a half months and three months.

The positive diagnosis can be posed with certainty thanks to the high digestive endoscopy with biopsy, the aspect is that of a stenosis in sometimes ulcerated shell (7). The video capsule is a tedious reading exam (30-40min), the most recovered aspect is that of a mass but it is sometimes difficult to distinguish the intrinsic or extrinsic origin of the mass. The replication transit with fluid baryta and abdominal compression is indicated in 2nd intention to specify the seat and the exact extension of a malignant process and its sensitivity is 81.9% (8).

Laparotomy and exploratory laparoscopy may be indicated as first-line treatment in cases of acute complication and last-intention when explorations are negative and if symptoms persist. This exploration makes it possible to specify the stage of the tumor and to make the extension assessment.

Abdominal CT can visualize lesions with a sensitivity of 94% and a specificity of 82% (9). It allows to appreciate the predictive morphological characters of malignancy as well as the evaluation of

locoregional extension (9). The main interest of the duodenopancreatic magnetic resonance imaging lies in its non-irradiating nature and its resolution without contrast, it allows not the detection and the determination of the characteristics of the tumoral process, but also to make the assessment of extension as well as the follow-up therapeutic (10.).

The treatment of duodenal adenocarcinoma is mainly surgical. Chemotherapy and radiotherapy have not proven their role in treatment. The choice of treatment is made in multidisciplinary consultation meeting.

Curative surgery consists of either a cephalic duodenopancreatectomy or a segmental duodenal resection, with restoration of continuity. According to Chung (5), 35.7% of the cases of adenocarcinoma of the duodenum benefited from a curative treatment. In case of duodeno-pancreatectomy, tumoral excision is preceded by exploration of the abdomen for liver metastasis, lymph node in the celiac trunk or retroperitoneal space, carcinomatosis peritoneal and thus extension to the sheath of the superior mesenteric artery indicates the cephalic duodenopancreatectomy.

The segmental duodenal resection consists of a bulbar duodenectomy which carries the 1st duodenum and two thirds of the stomach, the restoration of continuity is done in a gastrojejunal anastomosis. This technique allows lymph node dissection of the pyloric artery and the ganglia of the small gastric curvature as well as the resection of the small epiploon. The final duodenectomy consists of an excision of the 3rd and 4th portion of the duodenum, the duodenojejunal angle and ganglia of the left border of the superior mesenteric pedicle. Continuity restoration is by endo- or late-terminal duodenojejunostomy (2).

For tumors of the 1st duodenum the surgical attitude is controversial, some authors prefer segmental resections (13), others prefer the cephalic duodenopancreatectomy (14). In the case of peri-ampullary tumors and the second duodenum, cephalic duodenopancreatectomy is the treatment of choice for the majority of authors (15).

For distal tumors (3rd and 4th duodenum), some authors advocate segmental resection (14), others are for cephalic duodenopancreatectomy (16).

The mortality rate is 3% after cephalic duodenopancreatectomy and 1% after segmental resection.

Palliative surgery is recommended for non-extirpable tumors, by invasion of neighboring organs with the exception of the head of the pancreas, by invasion of the portal trunk or the mesenteric axis, or in the case of distant metastasis (17). and it consists of a biliary and / or digestive bypass as the case may be.

Duodenal adenocarcinoma has a poor prognosis, which is improved by complete resection. The average survival is 19 months with a 5-year survival less than 30% (6).

CONCLUSION

Duodenal adenocarcinoma is a rare malignant tumor, but remains the most common tumor of the small intestine. Radical surgery is the basis of treatment for these tumors. Duodenopancreatectomy remains the treatment of choice. Palliative surgery is indicated for unresectable tumors.

Conflict of interests

The authors do not declare any conflicts of interest.

Contributions of the authors

All authors contributed to carry out this study and they read and approved the final manuscript.

REFERENCES

[1] Bonfante F. et al. Adenocarcinoma primitivo del dudebo : tre casi clini considerazioni prognostic- terapeutiche.G Chir **2008** ;29 :207-211.

[2] Benz-Lemoine E., Marchai AL., Bretagne M., Schmitt M., Olive D. Adénocarcinome multiple dudénojéjunale chez un enfant de 9 ans. Ann pédiat. **1984** ;1984; 31: 783-786.

[3] Kelsey CR., et al. Duodenal adenicarcinoma: patterns of failure after resection and role of chemoradiotherapy.*IntJ J Radiat Oncol Biol Phys*.**2007**;69(5):1436-41.

[4] Malajati H.,Nassar I.,SQUALLI., Hammani L.,Imani F. Adénocarcinoma duodenal primitive. Feuillets de radiologie.Ed MASSON **2010** ;50 :248-251.

[5] Chung W C., Paik C N. , Jung S H., Lee K M., Kim S W., Chang U. Prognostic Factors Associated with Survival in Patients with primary Duodenal Adenocarcinoma. The Korean Journal of internal Medicine **2011**; 26:34-40.

[6] Krami H., Benzzoubeir N., Ouazzani L., Fadli F., Ouazzani H., Dafiri N., Bennani A. Adénocarcinome primitif du duodenum. Medicine du Maghreb **1997**; 63:29-32.

[7] Adedeji OA.,Serrano CT., Zarco MG. Primary duodenal carcinoma. *Postgrad MedJ* **1995**; 57:357-358.

[8] Anastasopoulos G., et al. Adenocarcinoma of third portion of duodenum in a man with CREST sydrom. *World J Surg Oncol* **2008**.6:106-109.

[9] Buckley J A., Siegelman S.S., Jones B.,Fishman E K. The accuracy of CT staging of small Bowel adenocarcinoma: CT Pathologic correlation.*J Comput Assist Tomogr* 1197.21/986-91.

[10] Jausset D.R. et al. Imagerie des syndromes tumoraux du duodénum chez l'adulte. EMC-radiologie et imagerie médicale-abdominale digestive **2013** ; 33-155-A-10.

[11] RugierP., Mitry E., Dminguez S., Taieb J. Les cancers digestifs.ED: SPRINGER **2006**:256-26.

[12] Kaklamanos I.G, et al Extent of resection in the management of duodenal adenocarcinoma.*Am J Surg* **2000**;179: 37-41.

[13] Liang T.J., et al. Number of involved nodes is important in the prediction of prognosis for primary duodenal adenocarcinoma. *Journal of the Chinese Medical Association* **2012**; 75:573-580.

[14] Czaykowski P., Hui D. Chemotherapy in small bowel adenocarcinoma: 10-year experience of the british Columbia Cancer Agency. Clin oncol (R Coll Radiol) **2007**; 19:143-9.7

[15] Edwin O et AL. 15 Years experience with surgical treatment of duodenal carcinoma: a cpmparaison of periampullary and extra ampullary duodenal carcinomas. *J Gastrointest Surg* **2012** ;16 : 682-691.

[16] Rudan N.,Nola P.,Popovic S. Primary Adenocarcinoma of the duodenum: report of two cases. Cancer **1984**; 549: 105-109.

[17] Sarfaraz J.B. Malignant Tumor at the Fourth Part of Duodenum. Mmicking Wilkie syndrome. *Indian J Surg* **2011**; 73(4): 301-303.