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**Cancers of the head of the pancreas and prognostic factors: Experience of the Department of Visceral Surgery wing 3 at the Ibn Rochd University Hospital of Casablanca and the Faculty of Medicine and Pharmacy of Casablanca, Morocco (About 50 cases over a 5-year period)**

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**ABSTRACT**

*Pancreatic cancer is the third digestive cancer in Morocco. it is an adenocarcinoma in over 90% of cases. its prognosis is poor. Conventionally, survival studies analyze prognostic factors related to the patient, the characteristics of cancer and the treatment. Our study included 50 cases of pancreatic head cancer that were followed in the Visceral Surgery (aile 3) department at the teaching Hospital Ibn Rochd of Casablanca from January 2011 to Decembre 2015. The objectives of the study are to define the different characteristics of cancer of the pancreatic head, to study the actuarial survival and to define the prognostic factors of cancer of the pancreatic head.*

**Keywords :** Adenocarcinoma of the pancreatic head, survival, prognostic factors.

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**INTRODUCTION**

The primary malignant tumors of the pancreas are located preferentially in the head of the pancreas (70%). Pancreatic ductal adenocarcinoma accounts for 90% of pancreatic cancers and the fifth leading cause of cancer death in Western countries. It is the most unfavorable digestive cancer with a 5-year overall survival rate of less than 5%. Some risk factors have been identified: tobacco, diets high in fat and protein, alcohol consumption, and associated conditions such as diabetes and chronic pancreatitis. In addition, there is a family component (up to 10% of cases). Undeniable progress has been made in the area of medical imaging, making it possible to make an increasingly early diagnosis and therefore to perform an increasingly curative gesture. Surgical resection is the only treatment that can provide prolonged survival. The poor prognosis of pancreatic adenocarcinoma can be explained by a late diagnosis: about 85% of the patients have a curatively unresectable tumor on the initial extension, due to liver or peritoneal metastases (50%). Or a locoregional extension (35%).

**MATERIALS AND METHOD**

This is a retrospective study of 50 cases of pancreatic head cancer treated at the Visceral Surgery Department (wing 3) at the Ibn Rochd University Hospital in Casablanca over a period of 5 years,

since January 2011 Until December 2015. Our series comprises 32 men, 64% of cases, and 18 women, or 36% of cases with a sex ratio of 1.8. The average age in our series was 58 years. 23 patients were tobacco, 46%, 12 patients were alcoholics, 24%, and 13 patients, 26% of whom were diabetic in our series. No patient had a family history of head cancer of the pancreas. The average time of consultation in our patients was 2 months. As for the circumstances of the discovery, epigastralgia and jaundice were the most frequent call sign in 80% of the patients in our series, followed by the altered general state found in 74% of the cases, Digestive haemorrhage in 8% of cases. Physical examination revealed jaundice in 74% of cases, epigastric sensitivity in 46% of patients, a large gallbladder was palpated in 38% of patients, and ascites were detected in 10% of the patients. Biological cholestasis with total bilirubin is found in 24% of patients, moderate cytolysis in 48% of cases. All patients in the series had normal prothrombin levels. The dosage of tumor markers mainly CA 19.9 was done in 46% of cases, returning positive in 36% of patients. ACE was performed in 34% of cases, returning positive in 18% of cases. Abdominal ultrasound was performed in 64% of patients, suggesting the diagnosis in 48% of patients by indirect signs such as the presence of a large gall bladder and the dilation of intra- and / or extra- liver. Abdominal CT was requested in 88% of patients in our series who diagnosed pancreatic tumors in 80% of patients. Echo-endoscopy was performed in a single patient in our series. It allowed to individualize the tumor at the level of the head of the pancreas. Abdominal MRI was performed in 20% of patients. It was requested in case of difficulty in scannographic characterization of the obstacle responsible for ductal dilation. In our series, no patients have undergone curative surgery (cephalic duodeno-pancreatectomy). 72% of the patients were operated on for palliative purposes: Choledochoduodenal derivation (52%), double derivation (3%), exploratory laparotomy without gesture (14%). Palliative chemotherapy was indicated in 18% of patients. Evolution was followed in 46% of the sample. Total survival of patients was 6 months of 26.66% and 1 year of 13.33%. The search for factors influencing survival at 1 year allowed to retain 3 significant prognostic factors: age above 60 years, tumor size and distant metastasis.

## RESULT AND DISCUSSION

Globally, pancreatic cancer ranks 13th among cancer cases for incident cases, with an annual number of cases estimated at 279,000 for 2008, ie 2.2%. [13]. Our series consists of 50 patients, 32 of whom are 64% of the cases, and 18 women, or 36% of the cases, with a sex ratio of 1.8, which is consistent with data from Western countries with a clear male predominance. The relative risk of pancreatic adenocarcinoma is increased in the event of over-consumption of tobacco with a relative risk of 2.2% [29]. There is no clear relationship between alcohol consumption and the risk of pancreatic cancer [14]. Ductal adenocarcinoma accounts for approximately 90% of pancreatic tumors. In 70% of the cases, the tumors are located at the level of the head of the pancreas. Early clinical signs of pancreatic cancer (anorexia, weight loss, nausea, abdominal pain) are not specific and explain the delay in diagnosis [21]. Jaundice is the second most frequent sign of the disease. It appears rapidly in the cephalic forms, which are very evocative when it is progressive and cholestatic [31]. Clinical examination finds jaundice with scraping lesions, hepatomegaly, palpable gall bladder and epigastric mass. There is frequently a biological cholestasis secondary to biliary obstruction. Serum CA19.9 and CEA levels were prognostic factors for survival [6,10]. Morphological examinations have a threefold purpose: the positive diagnosis of the pancreatic mass (aspect, situation, size), the confirmation of its nature and the realization of the pre-therapeutic extension report. Abdominal ultrasound is the first-line imaging exam in the diagnosis of pancreatic head cancer. It makes it possible to specify the site of the tumor, to evaluate its local and locoregional extension as well as its impact on bilio-pancreatic pathways [8]. CT is the most used technique after ultrasound in case of suspicion of neoplastic process of the head of the pancreas, it has a double interest: to affirm a possible cancer of the pancreas and to carry out the balance of

extension locoregional and at a distance [2, 9,22]. Echo-endoscopy is very effective for the assessment of tumors less than 3 cm in diameter, if necessary a cytopunction or biopsy for histopathological diagnosis [5,20]. It remains the most sensitive examination for the detection of adenopathies in particular peri-pancreatic [28]. The sensitivity of MRI for vascular invasion prediction varies from 70 to 90% [16, 17,24]. Endoscopic retrograde cholangiopancreatography (ERCP) is not used for diagnostic but therapeutic purposes. As for the biopsy, if the lesion is not resectable due to locoregional invasion or distant metastasis, a biopsy of the most easily accessible tumor can be performed under scannographic or echo-endoscopic control. The diagnostic accuracy of the puncture-biopsy is high (80 and 90%) [4, 12, 26,30]. Curative resection (cephalic duodeno-pancreatectomy), which is the reference treatment for pancreatic head cancer, is only possible in a few cases, as shown by several studies, such as those of Mouttet and al. [25], Baumel and Huguier [1] and Bramhalet al. [3]. The objective of the surgery is to obtain healthy resection margins with a surgical risk and functional sequelae as minimal as possible. There are 2 orders of operative contraindications: a postoperative mortality probability > 10% (this is the case of visceral failure) and nonresectability by the presence of the locally advanced character of the tumor. However, cancers of the head of the pancreas are only resectable in 10 to 25% of cases. In the literature, the intra-hospital post-operative mortality of CPD is less than 5% in the large series Of specialized hospitals [7,27]. The postoperative morbidity remains high since it affects 30 to 50% of the operated patients. The development of endoprotheses has modified the management of patients with jaundice and which are part of a palliative treatment. The goal of palliative chemotherapy is to improve symptoms such as pain, loss of appetite and asthenia, and to increase the survival time [19]. Cancer of the head of the pancreas constitutes the digestive cancer with the most pejorative prognosis, overall survival at 5 years is estimated at 4% [18]. The 3-year actuarial survival observed after DPC was equal to 41% according to the 2010 report of the French Association of Surgery (AFC) [11]. According to a meta-analysis published in 1995, the 5-year survival of unresected patients was less than 1% [3]. This prognosis may be influenced by several factors whose knowledge will improve the therapeutic decision. The classical prognostic factors reported in the literature are [23]: the tumor volume (superior survival if tumor diameter is less than or equal to 2 cm), the completeness of resection with healthy histological margins (R0), nodal invasion Which is prevalent even in cases of "small cancers" (5-year survival of 36 and 14%, respectively, in the absence or presence of invaded lymph nodes) [32], vascular invasion, peri-nervous invasion, The undifferentiated character of the tumor, and the post-operative transfusion qualities.

### CONCLUSION

Pancreatic head cancer is the most unfavorable digestive cancer, with a 5-year overall survival rate of less than 5%. The clinical picture is non-specific. Currently, imaging techniques theoretically allow the early diagnosis and characterization of tissue properties that may prove useful in differential diagnosis. Surgical resection is currently the only treatment that can provide prolonged survival. Our study made it possible to analyze the different prognostic factors related to the patient, the treatment and the tumor.

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