A Case Report onKlatskin Tumor

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ABSTRACT:
Background: Klatskin tumor (hilar cholangiocarcinoma or central bile duct carcinoma, KCC) is a rare type of tumor, with an annual incidence of no more than 1: 100 000. It originates from the bifurcation of the extrahepatic bile duct and was first described in 1965 by Gerald Klatskin who reported 15 cases and defined some features in this cholangiocarcinoma. Most KCCs are adenocarcinomas with poor differentiation degree, spreading along the duct and nerve sheath.
Presentation of case:A 55-year-old male came to a rural tertiary care hospital with the chief complaint of yellowish color of conjunctiva skin, pain in the epigastric region, loss of appetites, nausea in the last 6 days. After that doctor carried out an investigation history collection, and physical examination finding of this icteric sclera presented in the eye. The abdominal examination has done no mass palpable. CT SCAN and USG revealed were enlarge intrahepatic bile duct and obstruction consist. CA (serum carbohydrate antigen) 19-9 glycoprotein elevated. Blood investigation was carried out and found alkaline phosphate 417 (IU/L) was elevated, total bilirubin 18.6 level elevated BU Bilirubin Unconjugated 1.7 and gamma-glutamyl transpeptidase level elevated. A bile specimen taken from an external Drawing catheter revealed the Growth of Pseudomonas aeruginosa. WBCs - Neutrophilic leucocytosis up to the stage of band forms. The treatment he receives Percutaneous transhepatic biliary drainage with biliary stenting done under anaesthesialocal.The patient received symptomatic treatment after surgery. Inj. Piptaz 4.5 gm for 5 days, Inj. Metrogyl 100ml 5 days, Inj. Vitamin k 1 amp for 3 days. patient vitals stable. The condition of the patient was stable.

KEYWORD: Klatskin tumor, choledochectomy, gamma-glutamyl transpeptidase, Jaundice, Hepatic cholangiocarcinoma.

INTRODUCTION

Klatskin tumor is a biliary tract tumor originating from the main hepatic duct or right-left intrahepatic duct and seen proximal to the opening of the cystic duct.[1]Cancer of the bile duct, cholangiocarcinoma, can occur anywhere along the biliary tract from the ampulla of Vater to the intrahepatic biliary radicals. The hepatic duct bifurcation is the most frequently involved site accounting for approximately 60–80% of cholangiocarcinoma.[2]

The etiology of cholangiocarcinoma has not been clearly defined. Several pathologic conditions, however, resulting in either acute or chronic biliary tract epithelial injury may predispose to malignant change. Primary sclerosing cholangitis, an idiopathic inflammatory condition of the biliary tree, has been associated with the development of cholangiocarcinoma in up to 40% of patients. Congenital biliary cystic disease, such as choledochal cysts or Caroli's disease, has also been associated with malignant transformation in up to 25% of cases. These conditions appear to be related to an anomalous pancreatic-biliary duct junction and, perhaps, are related to the reflux of pancreatic secretions into the bile duct. Chronic biliary tract parasitic infection, seen commonly in Southeast Asia due to ClonorchisSinensis and Opisthorchis viverrini, has also been identified as a risk factor. Although gallstones and cholecystectomy are not thought to be associated with an increased incidence of cholangiocarcinoma, hepatolithiasis and choledocholithiasis may predispose to malignant change. Finally, industrial exposure to asbestos and nitrosamines, and the use of the radiologic contrast agent, Thorotrast (thorium dioxide), are considered to be risk factors for the development of cholangiocarcinoma.[3]

Approximately 15,000 new cases of liver and biliary tract carcinoma are diagnosed annually in the United States, with roughly 10% of these cases being Klatskin tumors. Cholangiocarcinoma accounts for approximately 2% of all cancer diagnoses, with an overall incidence of 1.2/per 100,000 individuals. Two-thirds of cases occur in patients over the age of 65, with a nearly ten-fold increase over 80 years of age. The incidence is similar in both men and women.[4]

KT is a rare and highly malignant tumor of the biliary tract that is associated with poor survival. A considerable error in reporting KT was observed in the SEER ICD-O-2 classification system using a histological code for KT, which also included intrahepatic CC. To our knowledge, the current study represents the largest KT cohort according to the updated ICD-O-3 classification in the SEER database, establishing a more precise reporting of the demographics, management, and clinical outcomes. KT is more common among Caucasian males in the seventh decade of life and tends to occur in the extrahepatic ducts with locoregional presentation and size of 2-4 cm in size, with up to 15.3% of the patients developing distant metastasis. Although surgery remains the primary method of treatment for KT, radiation therapy in some studies has emerged as a promising adjunct for treatment, increasing overall survival. Future studies optimizing the dosage of radiation regimens to establish the relationship between the multimodal approach for the treatment and its impact on survival are needed. All KT patients should be enrolled in clinical trials or registries to allow for more defined multimodality management to optimize clinical outcomes for these patients.[5]

PRESENTATION OF CASE

A 55-year-old male came to a rural tertiary care hospital with the chief complaint of yellowish color of conjunctiva skin, pain in the epigastric region, loss of appetites, and nausea in the last 6 days. After that doctor carried out an investigation history collection, and physical examination finding of this icteric sclera presented in the eye. The abdominal examination did not mass palpable. CT SCAN and USG revealed were enlarge intrahepatic bile duct and obstruction consist. CA (serum carbohydrate antigen) 19-9 glycoprotein elevated. Blood investigation was carried out and found alkaline phosphate417 (IU/L) was elevated, total bilirubin 18.6 level elevated BU Bilirubin Unconjugated 1.7 and gamma-glutamyl transpeptidase levelelevated. CEA 3.33, Globulin (Calculated Parameter) 3.9. potassium 4.3, sodium 139,Phosphorus 4.0. A bile specimen taken from an external Drawing catheter revealed the Growth of Pseudomonas aeruginosa.WBCs - Neutrophilic leucocytosis up to the stage of band forms.The treatment he receives Percutaneous transhepatic biliary drainage with biliary stenting done under anesthesia local.Under all aseptic precautions, the right peripheral intrahepatic biliary duct was punctured using an 18 g puncture needle. access maintained using 5f sheath. Using 4f cobra catheter, obstruction crossed with Terumo guidewire in common biliary duct and duodenum. Terumo guidewire was exchanged with the stiff guidewire. 6f sheath placed over the stiff guidewire. Boston Scientific wall stent 10 mm x 94 mm was placed from the distal mutualbiliary duct to the right hepatic duct and a life star 10 mm x 80 mm was placed to the left hepatic duct. 8f pigtail external drainage catheter kept for external drainage.the procedure went uneventful. Inj. Piptaz 4.5 gm for 5 days, Inj. Metrogyl 100ml 5 days, Inj. Vitamin k 1 amp for 3 days. patient vitals stable. The condition of the patient was stable.

DISCUSSION

Klatskin tumor is an advanced disease that usually occurs in patients over age 60 years, which is similar to our results (median age: 71 years). Males and females were affected roughly equally in our study, but some studies have shown that males have a slightly higher incidence. Globally, the highest incidence of Klatskin tumors is in Southeast Asia, and the disease is rare in the United States. Cholangiocarcinoma is a malignant tumor of epithelial cells, originating from different locations in the biliary tree, and shows markers of biliary cell differentiation. Cholangiocarcinoma is classified according to anatomical location, including intrahepatic cholangiocarcinoma, perihilar cholangiocarcinoma, and distal cholangiocarcinoma. About 50% of cholangiocarcinoma are perihilar cholangiocarcinoma, 40% of cholangiocarcinoma are distal cholangiocarcinoma, and less than 10% of cholangiocarcinoma are intrahepatic cholangiocarcinoma. The perihilar cholangiocarcinoma is also called the Klatskin tumor. Due to its rarity, there has been little progress in many research aspects of the Klatskin tumor. Therefore, we conducted the present study using the SEER database to resolve this problem.6-17

Current unresectable disease criteria include major portal vein involvement or encapsulation, bilateral spread, bilateral hepatic artery involvement, unilateral liver arterial involvement, and the presence of distant lymph nodes or organ metastases. For patients whose tumors are operable, the current primary treatment is surgery. Several studies have shown that patients undergoing resection have significantly longer survival than non-surgical patients, and the overall 5-year survival rate for highly selected patients is close to 53%. The resection for the Klatskin tumor involves achieving an R0 surgical margin and then trying to improve the survival time. Several studies have shown that, compared with R1 resection, the overall survival rate of the R0 surgical margin increased significantly.18-21

There are also some other surgical factors and tumor features related to a longer survival time after surgery. Studies showed that the presence of lymph node metastasis was associated with poor survival. Some case analyses showed that elevated preoperative serum bilirubin, histological tumor type, and tumor differentiation in patients are associated with lower survival rates, although these findings vary from study to study. In our analysis, older age, higher M stages, and higher pathology grades were related to the worse prognosis.22

To the best of our knowledge, this is the first study to investigate the clinical characteristics of KCC and identify the difference between KCC and OCC. Although we used the SEER database, which contains massive patient data, there are still several deficiencies. It cannot provide the risk factors related to the KCC, and the surgical margin status is not available. Also, the recurrence data and detailed therapeutic methods are not provided. Even with these limitations, our study is the first to use a large public database cohort of KCC to investigate the characteristics of patients and tumors.[23]

Klatskin tumor is an epithelial bile duct tumor that originates from the main hepatic duct or the right-left intrahepatic duct and appears proximal to the opening of the cystic duct. In this study, we examined the demographic characteristics, clinical, laboratory, and radiological results at the time of the first presentation of patients who were diagnosed with Klatskin tumor in our clinic for three years. For the study; 16 patients who were hospitalized at Internal Medicine Clinic between June 1, 2015-May 1, 2018 were diagnosed with Klatskin tumors and were included retrospectively. Clinical, laboratory and radiological data of patients were analyzed. 16 patients were in the study, 10 were male, and 6 were female. The average age was 62.30 for males, and 65.33 for females. The most common symptoms respectively jaundice, itching, abdominal pain, anorexia, and weakness. Among the laboratory tests, the average of some values; AST:141.31 U/L, ALT:156.18 U /L, ALP:692.07 IU/L, GGT:622.14 U/L, T. Bilirubin:10.42 mg/dl, D. Bilirubin: 6.0 mg/dl, WBC:10.509 x103u/L. diagnostic ERCPs of the patients were examined; Klatskin tumor was considered in 14 patients due to stenosis in the proximal part of the common bile duct. Clinical and laboratory findings in Klatskin tumors are not specific and the diagnosis is usually made in the late period because the clinical presentation of the disease is confused with many other diseases.[24-26]

CONCLUSION

The ICD-O-3 has permitted a greater understanding of KT. KT is a rare and lethal biliary malignancy that presents most often in Caucasian men in their seventh decade of life with moderately differentiated histology. Surgical resection does not provide any survival advantage compared to similarly treated biliary CCs. In addition, the combination of surgery and radiation appeared to provide no added survival benefits compared to other treatment modalities for KT.

COMPETING INTERESTS:NO

FINANCIAL RESOURCE OF THE STUDY: Self

CONSENT As per international standards or university standards, patient written consent had been taken.

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