

Periampullary Carcinoma: Clinical Presentation and Diagnosis – a hospital based study

M U RAUF H A SHAH K MANZOOR

Department of Surgery, Nishtar Medical College, Multan

Correspondence to: Dr. Hamid Ali Shah, Associate Professor Surgery

This descriptive study was carried out including 10 patients with periampullary carcinoma in Nishtar Hospital, Multan. The objectives were to study different clinical presentations of periampullary carcinoma and various means of investigations to diagnose it. All patients having suspicion of periampullary carcinoma were studied. Original study included ten patients having remaining four patients were female. All male patients were smoker. Eight patients were amongst lower class, one patient was from middle class and remaining one patient was from upper class. Common clinical features were progressive painless jaundice, anorexia, weight loss, pruritis, abdominal pain, vomiting and malena. All patients were evaluated on history, clinical examination and laboratory investigations. All patients found to be anemic. LFT's were raised in all patients. ERCP was successful in 90% of cases in diagnosing the pathology and biopsy was possible in 40% of cases. Ultrasonography was quite good in differentiating the type of jaundice. It detected the tumour site in only 20% of cases. Ultrasonography was not able to detect the metastasis effectively. CT scan was quite helpful to detect metastasis. Ultrasonography and ERCP were quite good in diagnosing the biliary obstruction. CT% scan was helpful in staging purpose. We do not have the facilities of endoscopic ultrasonography, MRI, MRCP, PTHC, helical tomography and laparoscopy.

Key words: Periampullary carcinoma, jaundice, ultrasonography, ERCP, CT scan.

Periampullary carcinomas are cancers arising at or with in one centimeter of ampulla of Vater and include ampullary carcinoma, duodenal carcinoma and carcinoma of distal common bile duct. In this region approximately 85% of tumours arise from head of pancreas, 10% arise from ampulla of Vater and 5% arise from distal common bile duct and duodenum each. Patients with periampullary carcinomas usually present with jaundice, abdominal pain, anorexia and weight loss.

In patients with suspected periampullary carcinoma, radiological imaging is extremely important for diagnosis, staging and management. Older techniques such as upper gastrointestinal. Barium series may be positive in patients with large tumours. Sonography is useful investigation, ERCP is important in diagnosis of duodenal and ampullary carcinoma. It can also be used for placement of biliary prosthesis. Dynamic, thin section, contrast enhanced CT scanning is superior to sonography as it visualizes whole pancreas and detect metastasis effectively. Mesenteric angiography can be used for staging the tumour. Similarly (PTHC) can visualize the biliary obstruction.

Periampullary carcinoma has good prognosis as compare to pancreatic carcinoma. Five years survival rate of periampullary carcinoma ranges from 40%-50%.

The objective of this study was to find out different clinical features of periampullary carcinoma and different modes of investigations to diagnose periampullary carcinoma.

Patients and methods

A descriptive comprising of 10 patients was conducted at Nishtar Hospital Multan. All patients with clinical suspicion of periampullary carcinoma were included in the

study. Patients proved to have diagnosis other than periampullary carcinoma after full work up were excluded from the study. A separate file was maintained for each patient. A thorough history and full physical examination was conducted, relevant investigations were carried out. All, this was recorded in data collection form. Later on the patients confirmed to have periampullary carcinoma were included in study, rest were excluded.

Fig. 1. Age distribution (n=10)

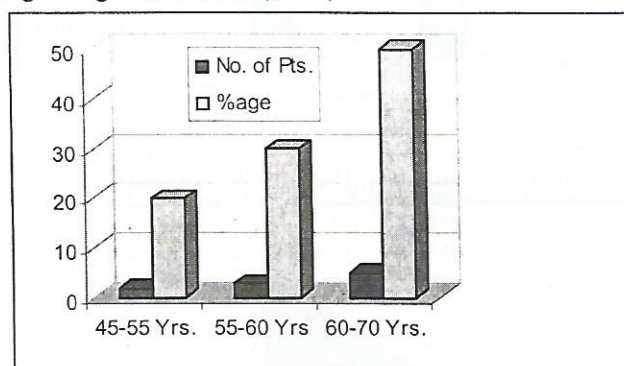


Table 1.

Symptoms	%age
Jaundice	90
Pruritis	80
Anorexia	80
Weight loss and lethargy	65
Abdominal pain	50
Vomiting	35
Mass right upper abdomen	20
Fever	10
Ascites	10
Haemetemesis	10

Table 2.

Sings	%age
Jaundice	90
Abdominal mass	20
Couroiser's sign	20
Left supra clavicular lymph node	10

Results

This study included ten patients having periampullary carcinoma. Out of these ten patients, eight patients (80%) were admitted from outpatient department: two patients (20%) were shifted form different medical wards having jaundice. Five patients (50%) were between 60-70 years, three patients (30%) were between 55-60 years and remaining two patients (20%) were between 45-55 years. No patient was below 45 years. Six patients (60%) were male and remaining four patients (40%) WERE FEMALE (Fig. 2). All male were smoker. Most of the patients belonged to lower socioeconomic group. Eight patients (80%) were amongst lower class, one patient (10%) was from middle class and remaining one patient (10%) belonged to upper class. Seven patients (70%) were resident of rural areas, while three patients (30%) were living in urban areas (Fig. 3).

Fig. 2. Sex distribution (n=10)

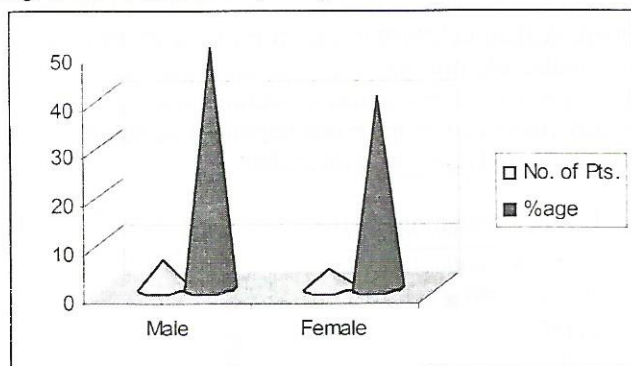
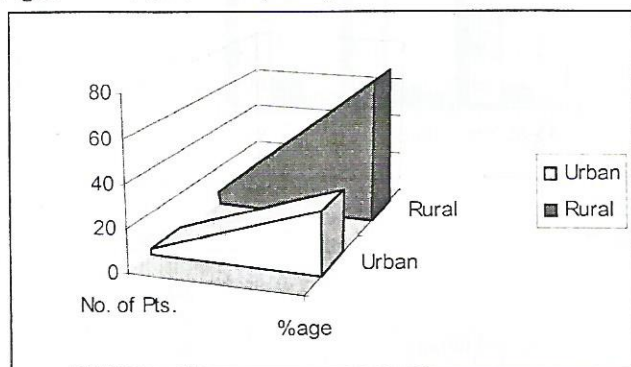


Fig. 3 Area distribution (n=10)



Main presenting symptoms in order of frequency were painless progressive jaundice in 90% of patients in 80%, anorexia in 80%, weight loss and lethargy in 65%, abdominal pain in 50%, vomiting in 35%. Mass right upper abdomen in 20%, fever in 10%, ascites in 10% and

haemeteme3sis in 10%. The duration of jaundice was more than 5 months in five patients (50%), 3-4 months in three patients (30%) all less than 2 months in two patients (20%). Six patients (60%) were also suffering from some medical problems like ischemic heart disease, diabetes mellitus and hypertension.

All the investigations including complete blood examination, complete urine examination, liver function tests and ultrasonography were performed in every patient. Further, each patient was also investigated by computed tomography and ERCP. As we have no facilities of helical computed tomography. Laparoscopy, mesenteric angiography, endoscopic ultrasonography and MRI, so none of these important investigations were performed. All patients were anemic, the hemoglobin being 7-11g/dl. Bilirubin level was raised in all patients, Bilirubin level was <40microM in six patients (60%).40-60microM in two patients (20%) and >60 microM in two patients (20%). They were designated as group 1,2 and 3 respectively (Table 3). Serum alkaline phosphatase was also markedly elevated. Six patients (60%) had alkaline phosphatase level >900IU/L and remaining four patients (40%) had level between 700-900IU/L (Table 4). Other liver enzymes were also mildly raised. Prothrombin time was >20 seconds in nine patients (90%), it was within normal range in remaining one patient (10%). All ten patients underwent ultrasonography abdomen, which showed dilated CBD in all patients (100%), concomitant dilatation of IHD in four patients (40%), distended gallbladder in two patients (20%) dilated pancreatic duct in one patient (10%), mass in periampullary region in two (20%) node metastasis in one patient (10%). The patients then underwent computed tomographic (CT) scan of the whole abdomen. All patients had dilated CBD (100%), nine patients (90%) had intra-hepatic ductal dilatation, and seven patients (70%) with dilated extrahepatic duct. Four patients (40%) had mass in periampullary region, two patients (20%) had enlarged lymph nodes and one patient (10%) had liver metastasis.

Table 3. Bilirubin

Level of bilirubin	%age
<40 microM	60
40-60 microM	30
>60microM	20

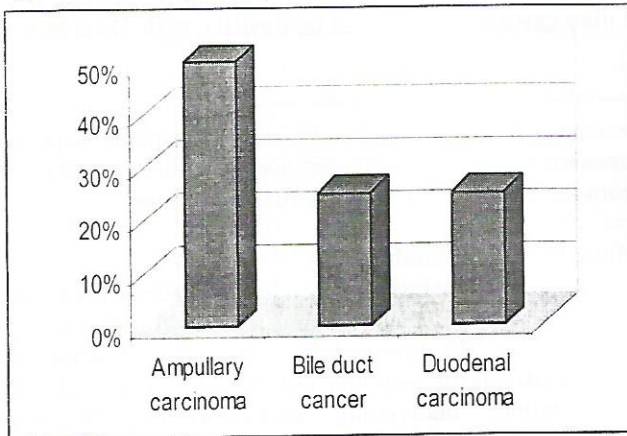
Table 4. Alkaline phosphatase

Level of alkaline phosphatase	%age
>900IU/L	60
700-900IU/L	40

All the patients underwent ERCP, which showed mass at the ampullary area described as polypoid, nodular or ulcerated mass in seven patients (70%). Stricture was present in distal common bile duct in two patients (20%). Biopsy was possible in four patients (40%) showing periampullary carcinoma. We had no facilities of Cannulation of common bile duct.

Lastly it was noted that carcinoma of distal common duct was common in female while carcinoma of ampulla of Vater was common in male. Carcinoma of duodenum was common in equal frequency in both sexes. Carcinoma of ampulla of Vater was the commonest one present in 25% of the patients each (Fig.4).

Fig. Incidence of periampullary carcinoma (n=10)



Discussion

Periampullary carcinoma comprise of 5% of the gastrointestinal tract malignancies⁴. Periampullary carcinomas are the cancers arising at or with in one centimeter of ampulla of Vater¹ and include ampullary carcinoma, duodenal carcinoma and carcinoma of distal common bile duct². In this region approximately 85% of tumours arise from head of pancreas, 10% arise from ampulla of Vater and 5% arise from distal common bile duct and duodenum each. Periampullary carcinoma though rare disease, has good prognosis if diagnosed earlier, five years survival rate being 40-50%⁵.

The presentation is quite variable ranging from non specific symptoms like anorexia, weight loss, fever, lethargy, upper abdominal pain, dyspepsia, flatulence, abdominal discomfort and intermittent jaundice (due to desloughing of the tumour) to progressive painless jaundice, itching, pruritis, abdominal mass, haemetemesis and ascites etc. Ampullary carcinoma produces all above symptoms, although weight loss and pain abdomen are less prominent. Obstructive jaundice is present in almost all cases³.

Carcinoma of distal common bile duct presents mainly with obstructive jaundice that is progressive and accompanied by itching and anorexia, however weight loss is not evident⁴.

Duodenal carcinoma presents with anemia due to ulceration of tumour, duodenal obstruction and obstructive jaundice, although general symptoms may be present⁵.

The area of present study included Southeast Punjab and adjacent parts of Sindh, NWFP and Baluchistan. In this region illiteracy is common. Moreover, most of the people are poor and health facilities are deficient. Due to all these fact ors, in the case of any illness, people usually

reach to the hospital quite late and there is an increased incidence of complications. It is also true for patients of periampullary carcinoma. In the initial stages when the symptoms are not so severe, they usually take treatment from local hakims or unqualified practitioners come to hospital quite late when the disease is advanced or some complication has occurred. This results in delay in adequate treatment.

Conclusion/suggestions

The present study concludes and suggests:

1. The periampullary carcinoma is although rare disease but has very good prognosis, if diagnosed earlier.
2. In present study most of the patients are in the 5th & 6th decade of life suggesting later age involvement.
3. Carcinoma of distal common bile duct is common in male while carcinoma of ampulla of Vater is common in female.
4. Cigarette smoking is an important predisposing factor for periampullary carcinoma in present study.
5. Painless progressive jaundice with pruritis is the commonest presentation of periampullary carcinoma.
6. Ultrasonography is helpful in most of the patients to differentiate between obstructive and hepatocellular jaundice.
7. CT scan is sensitive to detect secondaries in the liver and lymph nodes.
8. We should also try to improve the availability of health facilities for rural and far away areas.
9. Health education should be given to the general public through mass media so that diseases are diagnosed at an earlier stage.

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