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Document heading **doi: 10.21276/apjhs.2016.3.4.20** **Case report**

Extensive periampullary carcinoma with scapula metastasis: a case report

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ABSTRACT

Pancreatic carcinoma is a devastating carcinoma and is currently the fourth leading cause of cancer mortality in the United States. Periampullary cancer consists of pancreatic cancer, carcinoma of ampulla of vater, distal common bile duct and duodenum. Most common sites of metastasis are liver and peritoneum and other less common sites are lung, brain, kidney and bone in carcinoma pancreas .The prevalence of bone metastasis has been estimated between 5% to 20%.Here we are reporting a case of extensive periampullary carcinoma with scapular metastasis, which is a rare site of metastasis.

Key words: Periampullary Carcinoma, Scapular Metastasis, Skeletal Metastasis, Rare site ,Metastasis

Introduction

Pancreatic cancer, carcinoma of ampulla of vater, distal common bile duct and duodenum carcinomas are included in periampullary carcinomas.The global annual incidence rate for carcinoma of pancreas is about 8/100,000 persons[1]. It is currently the fourth leading cause of cancer mortality in the United States, and is anticipated to become the second by 2020[2,3].Tumors that metastasise mostly to bone include prostate, breast and lung[4].The most common sites for bone metastasis are the vertebrae, pelvis, ribs, sternum and skull[5].Pancreatic cancer usually metastized to liver and peritoneal cavity and less common to lung, bone and brain[6-8].Here we are reporting a case of pancreatic cancer presented with metastasis to skeletal and a rare site scapula.

Case History

A 30 year old male was asymptomatic 5 months back when he developed lower back ache and pain on right side of shoulder, not relieved with analgesics. He also developed decrease in appetite, nausea for 4 months, and pain in left lower leg for 2 months.On examination 5x5cm hard tender swelling present in right scapular region. Spinal tenderness is also present in L3, L4 and sacral region. Histopathology from pancreatic region is suggestive of adenocarcinoma [Figure 1].CECT whole body showed lytic, destructive lesion of right scapula, third lumbar vertebras and left sacral ala, extending upto articular margin. Multiple lobulated hypodense lesion present in liver, multiple discrete conglomerate necrotic lymph node are present in porat-peripancreatic region and para-aortic region.MRI left scapula [Figure 2] showed osteolytic lesion of left scapula. So the final diagnosis of carcinoma pancreas with liver and skeletal metastasis including right scapula was made.Patient then received palliative radiotherapy to scapular metastasis, left sacroiliac joint and third lumbar vertebra and is now on Gemcitabine and Cisplatin based palliative chemotherapy.

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Discussion

Periampullary cancer is usually managed by radical operative procedures in early stages. However 80% of patients present with disease that cannot be cured with radical surgery[9].In a study by Lee and Tatter *et al,* patients with carcinoma pancreas and periampullary cancer invariably present with metastasis to abdominal lymph node, liver and lung[10].Bone offers a suitable

environment for survival and expansion of cancer cells based on the ''seed and soil''theory [11].Tumours that metastasized mostly to bone include prostate, breast and lung[4].The most common sites for bone metastasis are the vertebrae, pelvis, ribs, sternum and skull. Pancreatic cancer usually metastized to liver and peritoneal cavity and less common to lung, bone and brain[5,8] and less frequently to ovary, ureter and umbilical region, bony metastasis to appendicular skeleton is common but metastasis to scapular region is rare. There are few case reports in which cancer like lung, esophagus, colon, germ cell tumor develop metastasis to scapula[12-15].To the best of our knowledge there is only one abstract published in literature which reported isolated right scapula metastasis from ampullaryadenocarcinoma[16].Patients presented with metastasis, usually have one or more site of disease most common being the liver followed by peritoneum and lungs[17-19]. In present study, patient has liver as well as skeletal metastasis including scapular involvement. Bone metastasis in carcinoma pancreas may be because of direct posterior extension of primary tumor and destruction of one or more upper lumbar vertebrae or may be due to hematogenous spread[20-22].In present case study, bone metastasis seems to be due to hematogenous spread. The intraosseous progression of pancreatic adenocarcinoma is promoted by cytokines such as interleukin 6, vascular endothelial growth factor (VEGF)and parathyroid hormone – related protein (PTHrP)[23,24].

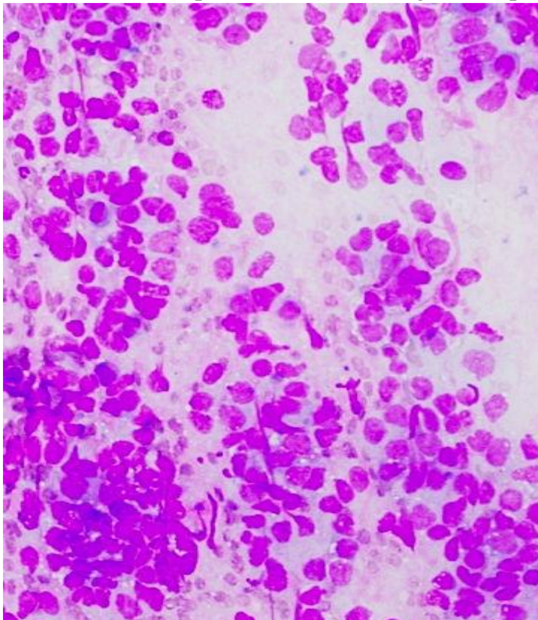

Fig 1: Histopathology showing adenocarcinoma

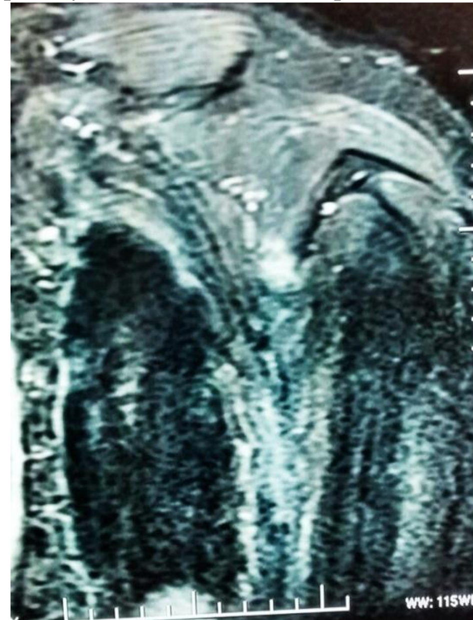

Fig 2: MRI Left Scapula Without Contrast Showing Metastasis

Conclusion

To the best of our knowledge present case of extensive periampullary carcinoma with scapula metastasis is the second case, reporting scapular metastasis from periampullary carcinoma. Our case highlights rare site of metastatic disease secondary to pancreatic cancer.

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