



Case Report

Metastasis of Gall Bladder carcinoma - A case Report

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ABSTRACT

Introduction: Metastasis of Gall Bladder Carcinoma (GBC) is very uncommon, aggressive and fatal cancer. World wide incidence rate reported as <2/100000 of all Gastrointestinal tumours. More frequent in women than men, older age more affected and coexisting Gall stones are seen in majority cases. Because of vague symptoms at early stage tumour will not be encountered, most of the patients present in advanced stage, prognosis is poor, hence Metastasis of GBC forms a diagnostic and therapeutic challenge.

Case Report: A 53 years old male, known diabetic past 10 years presented with intermittent vague symptoms of vomiting, nausea, fever, fatigue, right upper quadrant pain since 3 months. Family history of Gallstones and cancer was present. On examination 2-3 bilateral cervical swellings present, abdominal examination reveals liver was palpable 4 cms below the right costal margin.

Relevant investigations done. Complete blood count & Liver function tests were abnormal. Ultrasonography (USG) of abdomen and pelvis, USG guided FNAC of liver, CT of abdomen and pelvis, PET scan of abdomen, Histopathological and Immunohistochemistry report of left supraclavicular lymph node biopsy were suggestive of metastatic adenocarcinoma of GB origin. After appropriate staging adjuvant chemotherapy started, after third chemotherapy cycle he died due to metastasis of GBC, two months from his initial diagnosis.

Conclusion: In the present study patient was diagnosed in advanced stage, early diagnosis could be missed due to vague symptoms and as GBC is uncommon entity, So proper evaluation of the patient in early stage may prolong the survival.

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1. Introduction

Metastasis of Gall Bladder Carcinoma (GBC) is fifth most common Gastrointestinal tumour and most common malignant tumour of biliary tract.¹ GBC is fatal cancer and carries a 5 years survival rate of < 10%.² It still remains as lethal disease, in spite of advanced diagnostic measures because majority of GBC difficult to diagnosis in early stage due to its vague symptoms and its fast distant spread due to lack of GB serosa, leading in to advanced stage. Cholelithiasis is being the most frequent etiological factor

in majority of GBC patients.

2. Case Report

A 53 years old male, known diabetic past 10 years presented with vague intermittent symptoms of vomiting, nausea, fever, fatigue, right upper quadrant pain since 3 months. Family history of Gallstones and history of cancer was present. On clinical examination 2-3 bilateral supraclavicular lymph nodes were palpable and abdominal examination liver was palpable 4 cms below the right costal margin. Relevant investigations were done. Blood test: CBC and LFT tests were abnormal.

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USG of abdomen and pelvis shows mass in GB with large Gallstone- likely neoplastic with likely metastatic liver. USG guided FNAC of Liver lesion shows Adenocarcinoma deposits. Contrast enhanced Computed Tomography of abdomen shows features are possibly s/o Gallbladder neoplasm extension in to Liver. PET CT scan of abdomen reveals possibilities of metastatic locally advanced GBC. Biopsy of left supraclavicular lymph node suggestive of poorly differentiated adenocarcinoma metastasis. Immunohistochemistry of left supraclavicular lymph node biopsy positive for CK 20 and villin, features favour of metastatic adenocarcinoma of GB origin.



Fig. 1: USG of Abdomen shows metastatic Liver



Fig. 2: CECT of abdomen: ill defined focal irregular wall thickening /eccentric soft tissue lesion involving GB and extension to Liver

3. Discussion

Occurrence of GBC vary worldwide, it is high in South American Countries and some Asian countries.

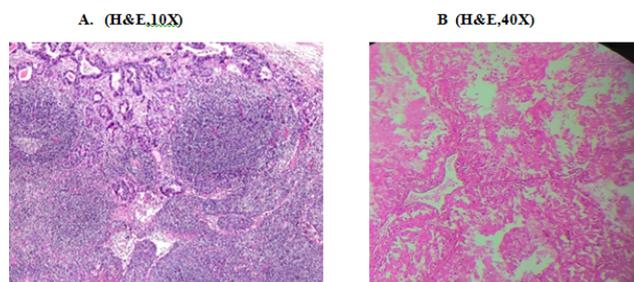


Fig. 3: HPR of Supraclavicular lymph node biopsy shows of Adenocarcinoma deposit of GBC

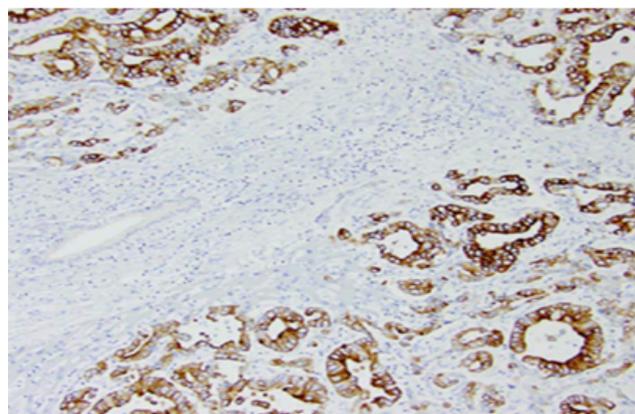


Fig. 4: IHC study of left supraclavicular lymph node biopsy shows CK 20 Positive

India in Delhi 21.5 per 10^5 .² South Karachi Pakistan 13.8 per 10^5 .³ In North India 1.5 per 10^5 , Native American Indian females 14.5 per 10^5 .⁴ Studies attributed this geographical differences in frequency of GBC possible due to environmental cause and ethnicity.

GBC is more prevalent in women and female-to-male incidence ratio reported as 3.²

The occurrences of GBC increases as age advances and reaches the peak during the seventh and eighth decades of life. Precise aetiology of GBC is not known but some studies attributed risk factors like cholelithiasis, chronic cholecystitis, choledochal cyst, free radicals, lipid peroxidation products, secondary bile acids, congenital malformations of biliary tract, heavy metals exposure, high carbohydrate diet, obesity, alcohol abuse and smoking. Cholelithiasis is found as coexisting risk factor in 85% of GBC patients. GBC has many different histopathological types, among them Adenocarcinoma is most (85%) prevalent type,⁵ other less common types include epidermoid carcinoma, adenocanthomas, oat cell carcinoma, carcinoid tumour and anaplastic carcinomas. Papillary, medullary, colloid, scirrhous, are different forms of Adenocarcinoma of GBC.⁶ Papillary adenocarcinoma most common form and has best prognosis due its very

low wall invasion. Other recent types of GBC include smetaplastic and non- metaplastic types.⁷

Studies observed that there is genetic mutations of k-ras gene in 39-59%, p53 gene in 35-92% of GBC cases seen.⁸ Also concluded that 83.33 % cases of metastatic GBC shows raised telomerase activity in GB tissue.⁹ In activation of tumour suppressor genes and deletion of Rb gene is seen in GBC patients.

As GBC is one of aggressive tumour and going for early eatastasis due to its many routes of spread. It spread by vascular, lymphatic, in traductal, in traperitoneal, neural routes, but in traductal route of GBC spread has a better prognosis. But loco regional spread more common than distant, as in our study metastases occurred in adjacent liver and lymph nodes. But distant metastases do occur, involving adrenals, kidneys, spleen, brain, bones, breast, thyroid, heart and uterus, with median survival rate 3 to 4 months in GBC with distant metastases.¹⁰

USG of abdomen help to detect suspected GBC as in our study. USG guided FNAC of Liver help in arrival of accurate diagnosis of GBC. In our study this helped to diagnose Metastatic Liver with suspicious of GB origin. CT is a very commonly used for the diagnosis of primary tumour of GBC, metastasis especially lymphatic and peritoneal metastasis and also for tumour staging. In our study CT abdomen diagnosed metastatic GBC. PET is very good imaging modality in diagnosis of GBC, metastasis and in accurate staging. In our case PET gave more accurate diagnosis of metastatic locally advanced GBC and staging was guided to start chemotherapy.

In our case study, for more accurate confirmation of metastasis of GB origin did by IHC study, which play a significant role in the management of GBC. Subjecting biopsy of lymph node staining for tumour markers, CK 20 and Villin showed aberrant expression, features favour of metastatic adenocarcinoma GB origin.

In the management of GBC, staging is very important. According to TNM Staging,T1/T2 stage, where tumour is confined to GB wall, usually surgery is performed. In T3 tumours can be resected but with enbloc resection of adjacent organs while T4 tumours are unresectable hence adjuvant chemotherapy is mode of choice.and molecular targeted therapy are also hopeful. Unfortunately, in our study, case was diagnosed in T4 stage and adjuvant chemotherapy started. Different regimens including combination of chemotherapy drugs, Gemcitabine, Cisplatin, Oxaliplatinand 5-FU, Adriamycin, Nitrosoureas are tried, but spread of disease was progressed, involving pancreas, lungs, bones, peritoneum, unluckily patient survival rate was only two months.

Recently a study was carriedon Triptolide, to identify its anticancer effectson GBC cells and concluded that Triptolide induce apoptosis in gallbladder cells and arrest the phase, hence it can be used as a potential drug for treatment of GBC.¹¹ Prognosis of patients with Advanced

GBC remains dismal and available surgical, adjuvant chemotherapy ,radiotherapy, molecular target therapy are hopeful and assumed powerful to some extent in prolonging survival. New effective treatment and drugs are an urgent need for GBC.

3.1. Conclusion

Early stage diagnosis of GBC can be difficult and challenging, often leading to delay in diagnose. Therefore, screening patients, who present with vague symptoms especially those who are at greater risk, essential given the possibility of coexisting GBC.

4. Conflict of interest

None

5. Source of funding

None

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