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Synchronous Double Primary Tumor of Gall Bladder and Stomach: A Rare Case Report and a Review Literature

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Abstract: We report a rare case of synchronous cancer of gallbladder and cancer of stomach which are very rare. A 56 year old female admitted in our hospital for pain abdomen. On routine workup and CT scan showed the doubtful about gallbladder cancer and cancer of stomach. Upper gastrointestinal endoscopic biopsy confirms the cancer stomach. At laparotomy, intra operative frozen diagnosis revealed the adeno carcinoma of gallbladder with no serosal involvement. The patient was under gone for Cholecystectomy with lymph node dissection and distal gastrectomy with Billroth 2 reconstruction. To the best of our knowledge we are reporting the first case of synchronous double primary malignancies of gallbladder and stomach in India. The patient is uneventful till 6 months of surgery and reporting of this case.
Keywords: synchronous, gallbladder cancer, stomach cancer, adeno carcinoma, Billroth 2.

INTRODUCTION

Synchronous cancers of upper gastrointestinal and biliary tract are rare but are being increasingly detected due to newer advanced diagnostic technique. According to the 1996 Annual of Pathological Autopsy Cases in Japan, edited by the Japanese Pathological Society, the incidence of double primary cancers was estimated to be 12.96% [1].We describe a case of synchronous, early, double cancer occurring in the gallbladder and stomach diagnosed on routine screening.

CASE REPORT

A 56 year old female admitted in our hospital because of pain right hypochondrium since 2 yrs often on. On admission vital signs (blood pressure, heart rate, respiration rate, and body temperature) were within normal limits. The patient was in good general health and had no significant weight loss. Her family history was unremarkable. On physical examination, the conjunctiva was anemic. The abdomen was soft but tender in the right upper quadrant. Slight resistance with lump in right hypochondrium was recognized in the tender area. Complete blood count and serum biochemistry data on admission showed the following: white blood cell, 12,410/uL; hemoglobin, 8.0 g/dl; hematocrit, 25.3%; platelet, 274000/mm3; blood glucose, 109 mg/dl; total bilirubin, 0.5 mg/dl; alkaline phosphatase (ALP), 39 IU/l; aspartate aminotransferase (AST), 93 IU/l; alanine aminotransferase (ALT), 64 IU/l, and amylase 202 IU/l; C-reactive protein 76.7 mg/l. Viral markers were hepatitis B surface antigen [HBsAg(-)], anti-HBs(-) and anti-hepatitis C virus(-). A computed tomography (CT) scan of the abdomen showed densely calcified calculus of 14mm in neck of gallbladder with wall thickening of body and fundal region more in favor of neoplastic than inflammatory. But on CT scan an additional feature we were found that there was diffuse circumferential thickening was seen in pylorus and antrum and pyloric canal measuring 12mm in maximum thickness leading to mild dilatation of stomach. These finding were more in favor of neoplastic etiology rather than inflammatory. Than we prefer to do upper gastrointestinal endoscopy and biopsy for stomach. Biopsy showed adeno carcinoma of stomach. So our preoperative diagnosis was carcinoma stomach with? Carcinoma gall bladder.

At laparotomy, the gallbladder was slightly distended and showed wall thickening felt on the surface of the gallbladder. Intra operative histological examination revealed adeno carcinoma of gallbladder with no invasion to the peri muscular connective tissue. The patient underwent surgical resection of the gallbladder. In our case, lymph node dissection was performed for the gallbladder tumour, because of the high suspicion of malignancy. This is in accordance with the recommendations of Uchimura et al [2], that lymph node dissection be performed for gallbladder cancer even in the early stages [2]. The combination of Cholecystectomy and lymph node dissection appears to be adequate treatment in these cases of early gallbladder cancer [3]. The patient was diagnosed with synchronous double primary cancer of the gallbladder and stomach, so additional procedure of distal gastrectomy with

Billiroth 2 reconstruction with a dissection of regional lymph nodes was done for carcinoma stomach.

Final histo pathological report of patient showed that of gall bladder microscopic finding revealed moderately differentiated adeno carcinoma which tumour shows infiltration throw per muscularis fibrous tissue (T2), it had not spread out of gallbladder Stage 2 T2N0M0 and in biopsy of distal stomach showed diffuse infiltration by poorly differentiated adeno carcinoma mainly up to subserosal T3, resected.

Fig 1: Showing pylorus canal thikning

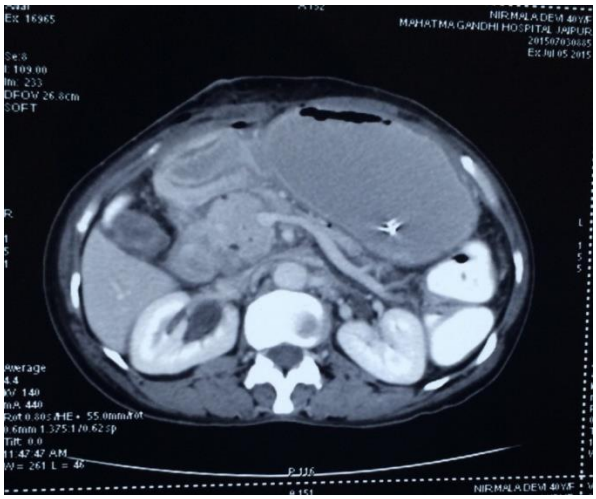

Fig 2: Showing Gall Bladder wall thinking

DISCUSSION

To the best of our knowledge no case is reported in India of synchronous distinct primary tumor of only gall bladder and stomach. . A search of the Japanese literature yielded 93 cases of double primary cancers involving the gallbladder over a period of 28 years (from 1973 to 2000). Of these, 37 (40%) cases were gastric cancers, while 26 (30%) were colon cancers.

Multiple primary malignant tumors in a single patient are relatively rare. Multiple primary cancers may be synchronous or metachronous depending on the interval between their diagnosis. Synchronous cancers are second tumors occurring simultaneously or within 6 months after the first malignancy, while metachronous multiple malignancies are secondary cancers that developed after more than 6 months from the first malignancy [4].

Three diagnostic criteria have been proposed for multiple primary malignancies:
1) Each tumor must present definite features of malignancy
2) Each must be distinct origin
3) The chance of one being a metastasis of the other must be excluded [1].

In reviews of the literature regarding multiple primary malignant tumors, the overall occurrence rate of multiple primary malignancies is between 0.73% and 11.7% [5]. Multiple primary cancers have become more common because of an increase in the number of elderly patients and advancement in diagnostic techniques.

In our patient, the malignant features were histo pathological proven in each tumor. Each tumor was pathologically categorized as a different staging; namely, the one detected in the gall bladder was a moderately differentiated adeno carcinoma stage 2 T2N0M0, The other one in the stomach was a poorly differentiated adeno carcinoma stage 2A T3N0M0. These findings might also support the fact that these two cancers occurred in a random and synchronous manner because in gall bladder cancer there was no serosal invasion.

Gallbladders containing stones or infectious agents develop cancer as a result of recurrent trauma and chronic inflammation. Although the mechanism involved in the development of multiple primary cancers has not been clarified, some factors such as heredity, constitution, environmental and immunological factors, carcinogenic, viruses, radiological and chemical treatments have been implicated [6].

In our case, lymph node dissection was performed for the gallbladder tumor, because of the high suspicion of malignancy. This is in accordance with the recommendations of Chimera et al, that lymph node dissection be performed for gallbladder cancer even in the early stages [2]. The combination of Chole cystectomy and lymph node dissection appears to be adequate treatment in these cases of early gallbladder cancer [3].

According to Yoshino *et al.;* [7] the prognosis of patients with multiple primary cancers can be determined independently by the stage of each cancer. The surgical treatment of choice for multiple primary cancers is curative resection of each cancer.

In our case adeno carcinoma of gallbladder was in stage 2 T2N0M0 and stomach cancer was stage 2A T3NoM0. The surgical treatment of choice for synchronous multiple primary malignancies is curative resection of each malignant tumors [7].

CONCLUSION

We report the first case of synchronous double primary malignancies of gallbladder and stomach in India. The possibility of synchronous multiple primary malignancies should be noted in the treatment of elderly patients with malignant tumor. Multiplicity of primary malignancies itself does not necessarily indicate a poor prognosis as long as adequate diagnosis and treatment are performed.

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