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A CASE OF XANTHOGRANULOMATOUS CHOLECYSTITIS MASQUERADING CARCINOMA GALL BLADDER

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Article Info

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Abstract

Introduction:

Xanthogranulomatous cholecystitis is a variant (destructive form) of chronic cholecystitis.

XGC is often masqueraded as gall bladder cancer as in some of the patients hence it is difficult to differentiate XGC from gall bladder malignancy radiologically and microscopically. XGC is often found to have a positive association with gall bladder carcinoma. The association is important because when both lesions are present in the same specimen, there is a possibility of overlooking the carcinoma altogether or, there is a risk of over or underestimating the extent of tumour and arriving at an incorrect estimate of prognosis.

Presentation of the case:

A 58 year old male came to Chettinad hospital and research institute, with complaints of pain and vomiting. Abdominal CECT and MRCP revealed thickening of the gall bladder with and areas of breach in gall bladder with extension to the liver. CA 19.9 values very markedly elevated. Hence, under the pre operative diagnosis of Gall bladder malignancy, a diagnostic laproscopy was done to rule out for peritoneal metastasis, proceeded to open cholecystectomy. However, the case was proven to be XANTHOGRANULOMATOUS CHOLECYSTITIS with no malignant cells.

Keywords: Xanthogranulomatous cholecystitis, frozen sections and biopsy, gall bladdermalignancy.

Case presentation:

A 58 year old male, known alcoholic and smoker(20 years), known diabetic and CAD patient, presented with compliant of pain in the abdomen for almost a week, colicky in nature, confined tothe upper quadrant of abdomen, intermittent, non radiating in nature.

History of vomiting since since 1 week, 4-5 episodes per day. Vomitus contained food particles,greenish in colour.

history of fever 10 days back (2-3 episodes), not associated with chills or rigors. History of chronic cough with expectoration present for last one year.

No history of significant weight loss, anorexia, or any previous abdominal surgery or trauma, recent jaundice. Normal bowel and bladder habits.

On examination, patient was afebrile, vitals stable.

Per-abdomen examination: Abdomen was distended, all quadrants moved equally with respiration, no visible mass/ pulsation/ peristalsis was noted.

On Palpation, mass was palpable in the Right hypochondriac region of size approximately 5*3 cms, (mass felt below the right costal margin, mass moved with respiration, had smooth surface, ill defined borders, variable consistency- firm to hard, no localised warmth or tenderness over the mass). Other systematic examination showed no abnormality.

Clinical impression was given to be Gall bladder mass for evaluation.

All the investigations were done, in which

TLC: 8900, HB: 12, RFT, LFT, Serum electrolytes were under normal limits. CA 19.9 was 67.97- significant. (Normal value: 0-37)

CEA was 1.61

ECG and ECHO was done.

USG ABDOMEN- 1) Thickened Gall bladder (wall measuring 9 mm) with internal debris and sludge noted. 2) periportal cuffing present.

UGI SCOPY- 1) gastric mucosa- laminators propria shows moderate lymphoplasmacytic infiltrates, severe clustering of glands and focal regenerative atypical. Surface shows intestinal metaplasia and mild atrophy seen. 2)duodenal mucosa shows lymphoplasmacytic infiltrates.

SCREENING CECT ABDOMEN- Involvement of segment 5 and 8 in the liver, no nodes involved.MR CHOLANGIO PANCREATOGRAPHY-

1) Diffuse irregular nodular wall thickening noted involving gall bladder with maximum thickness

measuring 1.8 cm in the fundus. No significant pericholecystic fat stranding.

2) Few areas of breach seen in the gall bladder wall along the fundus with extension to the liver.

3) Two calculus measuring 4 mm and 3 mm each noted in the neck of gall bladder.

4) possibility of MALIGNANT aetiology.

The provisional diagnosis after clinical examination and the investigations was made to be Gallbladder Malignancy.

And the decision was made to do DIAGNOSTIC LAPROSCOPY AND PROCEED. Intraoperatively, diagnostic laproscopy was done to rule out peritoneal metastasis and to assess operability. And then it was converted to open procedure.

Findings were: Thickened, contracted gall bladder with dense omental adhesions, adhesions to liver, stomach, transverse colon and duodenum were noted.

All the adhesions were dissected, callot's triangle identified and open cholecystectomy was performed, specimen was sent for frozen section, which was reported as benign granulomatous inflammation. Gall bladder was sent for Histopathological examination).

Here can be seen theHistopathological examination report:

Sections from Gall bladder show predominantly ulcerated mucosa. The wall showed sheets of foamy macrophages admixed with plasma cells, lymphocytes, few eosinophils. Giant cells along with fibrosis, vocally pyloric metaplasia of glands. Adherent omentum shows congested blood vessels. No evidence of malignancy identified in the multiple sections studied. Final impression was given to be: XANTHOGRANULOMATOUS CHOLECYSTITIS.

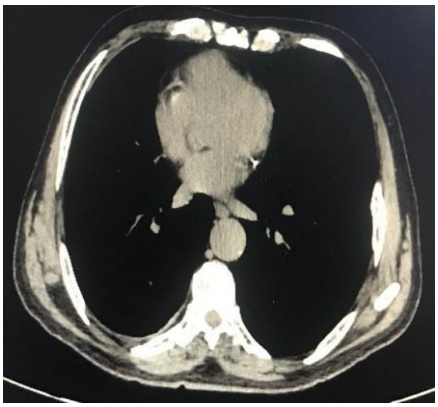

Fig. 1 shows images of gall bladder with intramural hypo-attenuating nodules in these thickened gall bladder walls, enhancement of the luminal surface.

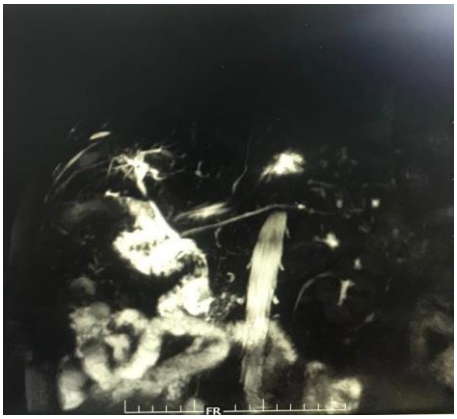

Fig.2- shows irregular nodular wall thickening of gall bladder on MRCP.

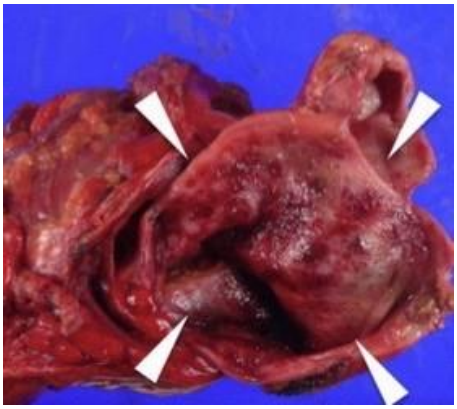

Fig. 3 shows evidence of hemorrhagic spots and several small yellow polypoid lesions.

The arrowheads indicate the lumen of the gallbladder.

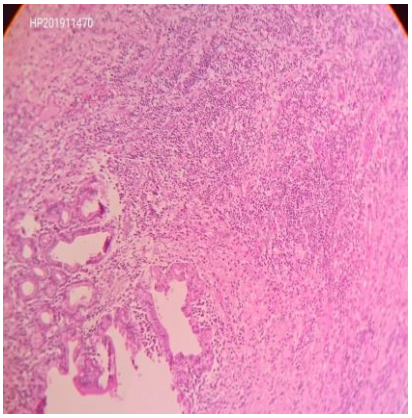

Fig. 4 shows wall of gall bladder with sheets of foamy macrophages admixed with plasma cells, lymphocytes, few eosinophils. Giant cells along with fibrosis, vocally pyloric metaplasia of glands.

Discussion about the case diagnosis:

Xanthogranulomatous cholecystitis is an uncommon disease of the gallbladder which is benign and inflammatory that might be misdiagnosed as carcinoma of the gallbladder on imaging.

It was originally reported by McDonald and Weismann in the year 1984. Characteristic feature is inflammatory process which can be diffuse or focal, and in addition to that there is a collection of lipid laden macrophages; fibrous tissue; acute or chronic inflammatory cells.

On per abdomen palpation, a mass is palpable in the right hypochondriac region or positive Murphy's sign can be elicited. All these features are cannot be said to be specific for xanthogranulomatous cholecystitis. And hence it is very difficult to differentiate xanthogranulomatous cholecystitis and carcinoma gall bladder clinically.

Among the laboratory investigations, Leukocytosis has been seen in some patients of XGC , however there is no particular biochemical test or LFT abnormalities pointing towards the analysis of XGC. In approximately 32 to 40% of cases, it is seen that the inflammatory process has spread to the surrounding structures like liver, colon or soft tissues.

Apart from the clinical findings, one more point of interest is that in both XGC and CARCINOMA STOMACH the tumour marker biomarkers (CA 19.9) is highly elevated.

On USG abdomen, XGC can present as the presence of gallstones with or without sludge formation, and there will gall bladder wall thickening (focal or diffuse).

CECT abdomen findings, focal/ diffuse gall bladder wall thickening, there can be intramural hypo- attenuating nodules in these thickened gall bladder walls, enhancement of the luminal surface can be seen with continuous mucosal-lines or else mucosal lines present with focal breach. Usually, in XGC Focal thickening is not more commonly seen and this is more likely to be a feature of carcinoma of the gallbladder. And for the Diffuse thickening which is associated with XGC, it is usually symmetrical, except for some cases 20% in which it is asymmetrical.

Coming to the pathological discussion, XGC can be characterised by the presence of nodules which are greyish yellow or presence of streaks in the all of the gall bladder. These are usually caused due to lipid macrophages. One hypothesis that has been proposed for the etiology for XGC is the ulceration of the mucosa or it can be rupture of the Rokitansky Aschoff sinus, this is due to increase in the intraluminal pressure (either due to gall bladder/ cystic duct obstruction). This eventually

leads to bile in gall bladder, leading to engulfment by macrophages and hence inflammatoryprocess.

Histology also findings include: Mural changes which can be diffuse or focal (which is in the form of xanthoma cells), presence of giant multinucleate histiocytes which on immunohistochemistry are positive for CD68 and acute chronic inflammatory cells.

In the above presented case, all the work up were indicative of some malignant condition and hence we proceeded with MRCP which gave an impression of possibility of a malignant aetiology.

For our case, we made the differential diagnosis to be:

1) Adenomyomatosis or 2) Carcinoma gall bladder. Conclusion:

XGC can sometimes be a diagnostic problem. It can be challenging sometimes to diagnose XGC based on imaging alone and hence FNAC is helpful in pre operative diagnosis. Since in our case since malignancy was suspected, diagnostic laproscopy-frozen and proceed (open cholecystectomy)was performed.

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