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A Case Review of Carcinoid Tumor in Appendix.

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ABSTRACT

Acute appendicitis is the most common acute surgical condition of the abdomen. Acute appendicitis may occur at all ages, but is most commonly seen in the second and third decades of life.

Neoplasms of the appendix are extremely uncommon and are usually diagnosed at operation or autopsy. Neoplasms of the appendix are found in 1% of appendectomy specimens, with the vast majority being an incidental finding. Most tumours involving the appendix may be classified as either carcinoid or epithelial, with the latter group accounting for approximately three-quarters of all cases. MALIGNANT tumours are : (i) Carcinoid tumour; (ii) Adenocarcinoma; (iii) Malignant mucocele.

A 49 year male patient residence of delhi north india. Arrived in casualty with complain of pain in abdomen. Patient was admitted, Diagnosis acute appendicitis was done on the basis of clinical and labrotory investigations. Surgery open appendectomy was done sended HPE sample shows Carcinoid tumour of appendix a rare finding. Chemotherapy was given to the patient. Recovery period was good and no other complications were seen.

I. INTRODUCTION

Multiple studies have evaluated the prevalence of mass lesions present in appendectomy specimens. The prevalence of identifying a mass within the appendix is less than 1%. Appendiceal carcinoid and appendiceal adenomas are the most common lesions identified. There is no clear age relationship associated with the identification of these masses[1]. Carcinoid tumours arise in argentaffin tissue (Kulchitsky cells of the crypts of Lieberkühn) and are most common in the vermiform appendix. Carcinoid tumour is found once in every 300–400 appendices subjected to histological examination. In many instances, the appendix had been removed because of symptoms of subacute or recurrent appendicitis[2]. Whereas mucocoele of appendix means accumulation of Mucus within the lumen of the appendix. It can be due to a simple retention cyst due to blockage by foreign body or mucosa! hyperplasia. It can also be due to a mucinous adenocarcinoma The majority of epithelial tumours of the appendix are mucin rich, thus results in gross distension[3].

Carcinoid

The finding of a firm, yellow, bulbar mass in the appendix should raise the suspicion of an appendiceal carcinoid. The appendix is the most common site of gastrointestinal carcinoid, followed by the small bowel and rectum[4]. Carcinoid syndrome is rarely associated with appendiceal carcinoid unless widespread metastases are present, which occur in 2.9% of cases[5]. Symptoms attributable directly to the carcinoid are rare, although the tumor can occasionally obstruct the appendiceal lumen much like a fecalith and result in acute appendicitis[6].

The majority of carcinoids are located in the tip of the appendix. Malignant potential is related to size, with tumors <1 cm rarely resulting in extension outside of the appendix or adjacent to the mass. The mean tumor size for carcinoids is 2.5 cm.133 Carcinoid tumors usually present with localized disease (64%). Treatment for tumors ≤1 cm is appendectomy. For tumors larger than 1 to 2 cm located at the base, involving the mesentery, or with lymph node metastases, right hemicolectomy is indicated. Despite these recommendations, surveillance, epidemiology, and end results data indicate that proper surgery for carcinoids is not performed at least 28% of the time[7].

Case presentation-

A 49 year male patient arrived in casualty with c/o pain in abdomen since 1 week, nausea (on & off), Fever (on & off), vomiting 1 episode on arrival. No any known comorbidity noted. Surgical history- laparotomy was done for gastric ulcer

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perforation 25 years ago. Habitual history of alcohol intake and cigarette smoking since 20 years. No any specific known allergy noted. No any specific family history noted. No any history of weight loss noted. On general examination per abdomen shows tenderness on right iliac fossa, Rovsing sign positive, Psoas test positive, Obturator test positive, rebound tenderness present. Bowel sound present on all four quadrant. Urine and stool was passed. Per rectal examination shows sentinal tag at 12'o clock position externally. Digital examination shows rectum empty, prostate mildly enlarged, soft in consistency and mucosa free. Observation on examination shows BP-110/70 mmHg, pulse-96/min, temp-98.5 F. systemic examination CVS-S1 S2 sinus tachycardia, R.S- B/L clear air entry, C.N.S-concious and oriented, R.R-22/min, pupils-B/L reactive to light, Nails-NAD, conjuctiva-NAD, tongue-Moist.

Patient was admitted and routine investigation was done. Lab reports shows Hb-15.1 g/dl, WBC-6200, platelet-2,71000, BUL-25.4 mg/dl, Sr. Creatinine-0.88mg/dl, B.T-1.15min, C.T-4.55min, I.N.R-1.14, HIV-Negative, HbsAg-Negative, urine routine- pus cell 1-2/hpf epithelial cell- 1-2/hpf rest within normal limits. ECG Wnl, Chest X-ray NAD. USG (abdo-pelvis)- dilated tubular blinding ending structure noted in right iliac fossa, infero-medial to ceacum at 5'o clock position. It appears grossly dietended with mucinous heterogeneous collection within measuring 38mm in diameter and 6.5cm in length. Its tip is directed laterally. Its wall appears edematous. Mesentry in right iliac fossa appears echogenic. Features are most likely s/o mucocele of appendix. Alvarado score was 5 out of 10.

As per the clinical findings and investigations appendicitis diagnosis was done. Pre operative lab and fitness was done. I/V antibiotics, Analgesic, Antacids, Anti emetics and fluid was started open Appendectomy was done through mcburney's incision approx size 16cm in length, appendix appears inflamed and edematous with approx diameter 18mm and length 14cm. No any specific event noted intra operative. Appendix sample sent for HPE. Report shows Vermiform Appendix, Appendectomy:

-- Low-grade neuroendocrine tumour (carcinoid tumour)
-- Margins clear.
-- thickened swollen inflammed appendix
- -acute appendicitis with periappendicitis.

Comment:

The tumour stains as follows:
POSITIVE: AE1/AE3, chromogranin A, synaptophysin, CD56.
NEGATIVE: CK7, CK20, S100.
PROLIFERATION (Ki-67): <3%.
The low-grade neuroendocrine tumour (in the planes of section) is in the tip. Findings are suggestive of carcinoid tumour.
IHC report shows CD_{20} – Diffusely positive in the tumour cells. CD_3 _ strains reactive T – Cells in the background Ki – 67 index > 80%.
No any other complications noted followed by the surgery. Patients was discharged in good healthy condition. After the HPE report chemotherapy was given to the patient. Recovery period was good and no other complications were seen after the incidence. Patient is healthy and living his life in fulfillment

II. DISCUSSION

Carcinoid tumors of the appendix are relatively uncommon neoplasms. It has been reported that carcinoid tumor ranges between 0.3 and 0.9%, as determined using histopathological examination[8,9]. however, appendiceal carcinoids are the most frequent tumors arising from the appendix, comprising between 32 and 57% of all appendiceal tumors [10]. carcinoid tumors are neoplsms which are derived from the subepithelial neuroendocrine cells of the appendix which are not malignant[11].

There is no specific pre-operative clinical presentation for appendiceal carcinoids. In general, appendiceal carcinoids are either asymptomatic or present as acute appencitis, which are diagnosed incidentally as appendiceal carcinoids [12].

III. CONCLUSION:

Appendix carcinoid tumors are quite rare in condition, usually asymptomatic and diagnosed incidentally on histopathological examination after appendectomy. The treatment of carcinoid tumors of the appendix is directly related to the tumor size, localization, presence of lymphovascular and mesoappendix invasion, mitotic activation rate and level of Ki67. Thus, it is important to follow the histopathological results after appendectomy. The prognosis of appendix carcinoid tumors is very good if the appendix is non-perforated.

Conclude that simple appendectomy is adequate treatment for patients with apparently localized tumors <2.0 cm in largest dimension. Simple appendectomy is probably also appropriate treatment for lesions ≥2.0 cm in elderly patients or

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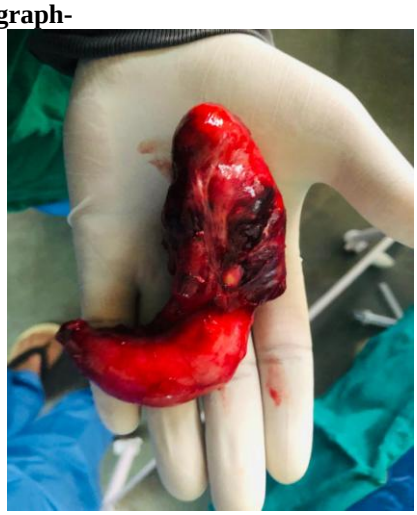
in those at high operative risk. Right hemicolectomy seems justified only in young patients with tumors ≥2.0 cm who have a low risk of operative morbidity or mortality. Vascular involvement and invasion of the mesoappendix are features that may favor a more radical approach.

Photograph-



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