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Original Research Paper

General Surgery

# PRIMARY PARITONEAL CARCINOMA

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**ABSTRACT** The malignant cell infiltration of serous membrane lining the abdominal cavity is called as peritoneal carcinoma. When carcinoma arises as de novo in the mesothelium of abdominal cavity it is termed as primary peritoneal carcinoma. Here we are discussing about a 62/F who presented with vague abdominal symptoms and was diagnosed as primary peritoneal carcinoma.

**KEYWORDS :** primary peritoneal carcinoma, extra-ovarian primary peritoneal carcinoma(EOPPC); malignant mesothelioma(MPM); multi cystic mesothelioma; leiomyosarcoma; leiomyomatosis peritonitis disseminate; desmoplastic small round cell tumour, HIPEC (hyperthermic intraperitoneal chemotherapy); EPIC (early postoperative intraperitoneal chemotherapy)

## INTRODUCTION :

The malignant cell infiltration of serous membrane lining the abdominal cavity is called as peritoneal carcinoma. When carcinoma arises as de novo in the mesothelium of abdominal cavity it is termed as primary peritoneal carcinoma and when it arises as a result of dissemination of tumour cells from other sites into the peritoneal cavity then it is termed as secondary peritoneal carcinoma. The age adjusted incidence rate is 6.78 per million.

Patients usually presents with vague clinical symptoms such as vague abdominal pain, weight loss or loss of appetite. Due to this vague clinical presentations these are usually diagnosed in a late stage. Primary peritoneal cancers are staged as stage III or IV usually. Due to this the overall survival rate is also poor for these patients.

Here we are discussing about a 62/F who presented with vague abdominal symptoms and was diagnosed as primary peritoneal carcinoma.

## Case Report :

A 62/F, P2L2 post menopausal status presented with chief complaints of swelling over abdominal wall and abdominal pain with history of loss of appetite and significant loss of weight for the past 3 months. Physical examination revealed a supraumblical hernia. On palpation, left supraclavicular node of size 1x1cm, hard in consistency was present . On percussion, fluid thrill was elicited. Digital rectal examination and per vaginal examination was insignificant. History and clinical findings were consistent with Advanced carcinoma with unknown primary and supraumblical hernia. We proceeded with the following investigations which showed :

- Ultrasonography - Defect of size 2.2cm in the supraumblical region
- CT abdomen and pelvis –
- Defect of size 9.6mm with Herniation of omentum and Fluid
- Omental Haziness with stranding noted
- Peripheral enhancement of Hernial sac noted
- No obvious bowel wall thickening noted.
- Moderate ascites noted
- VOGD Scopy and Colonoscopy - Normal study
- FNAC of Left supraclavicular Node - Metastatic carcinomatous deposits probably adenocarcinoma
- Ascitic fluid analysis :
- CBNAAT - Negative
- Protein - 4.1 , Sugar -48
- No growth seen
- Tumour marker study was done and showed elevated CEA, CA19-9, CA-125.

Hence, we proceed with diagnostic laparoscopy which showed haemorrhagic ascites with numerous peritoneal deposits (fig.1) each measuring not more than 0.5cm distributed nearly over 10 regions of peritoneal cancer index. Peritoneal cancer index score of 30 was calculated. Biopsy was taken and sent histopathological examination. Rest of the abdomen and pelvic organs were found to be normal.

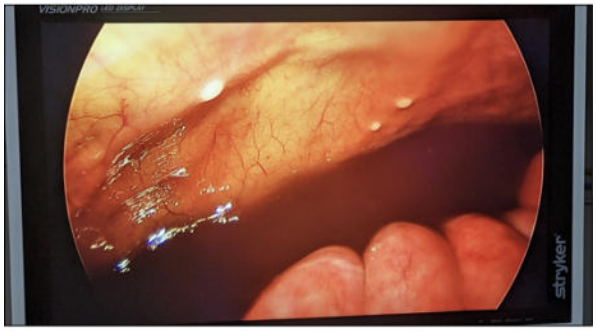


**Fig.1: haemorrhagic ascitic fluid with peritoneal deposits.**

## Histopathological report showed :

Infiltrating malignant neoplasm arranged in acinar pattern,Solid nest and focal papillary pattern, Solid to oval with moderate eosinophilic cytoplasm with prominent pleomorphic nuclei, with prominent nucleoli surrounded by desmoplastic stroma, Inflammatory granulation tissue with reactive mesothelial cells.

Omentum also shows same type of cells.
Metastatic Carcinomatous Deposits – Omentum and Peritoneum, Probably primary from ovary
FDG PET scan was also done following this and showed (Fig.2):

- mild diffuse omental thickening and stranding seen with focal areas of increased FDG avidity (SUV- 1.9 in right lumbar region)
- FDG avid enlarged and prominent perigastric and para aortic nodes
- FDG avid prominent left supraclavicular nodes
- PETCT features are suspicious for inflammatory etiology .

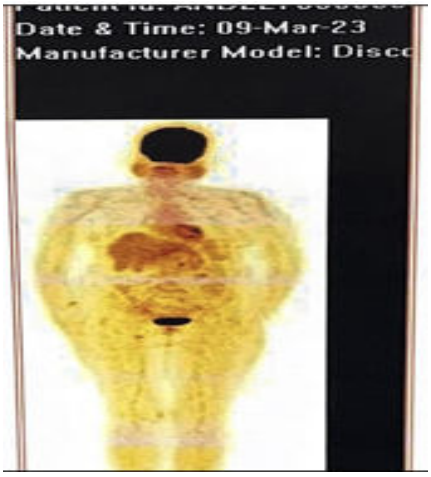


**Fig.2: FDG PET**

As there was no primary from ovary and fallopian tube, a diagnosis of Primary Peritoneal Carcinoma was considered. Case was taken up for tumour board discussion following which patient was started on systemic chemotherapy regimen for further management.

## DISCUSSION:

Primary peritoneal carcinoma is classified based on the histology into 6 variants namely, extra-ovarian primary peritoneal carcinoma(EOPPC); malignant mesothelioma (MPM); multi cystic mesothelioma; leiomyosarcoma; leiomyomatosis peritonitis disseminate; desmoplastic small round cell tumour.

Primary peritoneal carcinoma is considered as an advanced disease and hence the best treatment approach will be a multimodal therapy. A combination of surgery, chemotherapy and targeted therapy is the mainstay of treatment.

EOPPC and serous ovarian carcinomas have same line of management. In both cases we proceed with hysterectomy with bilateral salpingo-oophorectomy and omentectomy followed by chemotherapy and targeted therapy.

In MPM, first line of management is cytoreductive surgery with intraperitoneal chemotherapy such as HIPEC( heated or EPIC.

In DSRCT, neo-adjuvant chemotherapy is the primary approach for management.

## CONCLUSION :

Primary peritoneal carcinoma is considered as an end stage disease with poor prognosis with survival rate varying from 11-17 months.

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