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Krukenburg Tumour presenting as Pseudo Meig's Syndrome

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ABSTRACT

Meigs' syndrome is defined as a hydrothorax with ascites and a pelvic tumor, the condition resolves by itself with the removal of the mass. Pseudo Meig's Syndrome refers to secondary metastasis to ovary presenting with hydrothorax. Diagnosis a case of pseudo meig's is challenging as well as rewarding because removal of tumour not only gives symptomatic relief to the patient but may also prolong the survival time. A krukenburg tumour is an ovarian metastasis from gastrointestinal adenocarcinoma and it usually is suggestive of terminal disease. We present a case report from our Acharya Vinoba Bhave Rural Hospital, Datta Meghe Institute of Medical Sciences and Research which presented as pain abdomen since a year and upon investigations turned out to be a rare case of Pseudo Meig's Syndrome due to Krukenburg Tumour with Ascites and Hydrothorax.

Keywords: Meig's syndrome, Pseudo meig's syndrome, abdominal pain, ascites, pelvic tumor, metastasis.

1. INTRODUCTION

Meig's syndrome is of a rare kind described as the triology of benign solid ovarian tumours, ascites and pleural effusion (Meigs & Cass, 1937). It has a prevalence of around 1% of all ovarian fibromas. If left untreated, it can be fatal with lung failure the cause of death resulting because of larger quantity of pleural effusion (Hlaise & Shingange, 2012). This syndrome mimics malignant lesion, but on the contrary is a benign condition with favourable prognosis, if intervened early. Pseudo Meig's Syndrome refers to benign, malignant or metastatic tumours that arise from ovary, pelvic organs or extra pelvic organs with ascites and hydrothoax. A number of conditions like pulmonary tumours and over stimulation of the ovary with gonadotrophins can cause similar clinical presentation as pseudo meig's syndrome and thus needs to be ruled out. The hydrothorax can be bilateral but is most commonly right sided and resultant from ascites leading through diaphragmatic defect (Iyer, 2013). Diagnostic criteria for meig's syndrome are presence of benign ovarian tumour with ascites and right sided hydrothorax which should resolve on removal of the tumour. Ovarian Fibroma is a common cause of meig's syndrome (about 10-15%). Krukenburg tumour refers to metastasis to

the ovary from a primary site which classically lies in the gastrointestinal system however in some rare cases other tissues such as the breast tissue can also lead to krukenburg tumour (Timmerman et al., 1995). Pylorus of the stomach is a common source of krukenburg tumour with adenocarcinoma being identified microscopically after biopsy. Clinically it may present with pain abdomen, pain in pelvis or ascites. We present a rare case of adenocarcinoma of the stomach which metastatised to the ovary bilaterally leading to krukenburg tumour with presented with ascites and hydrothorax of the right side i.e Pseudo Meig's Sydrome. The ascites and hydrothorax later resolved after performing bilateral salpingo oophorectomy confirming the diagnosis of pseudo meig's syndrome.

2. CASE REPORT

A 52 year old female with parity 4 live 3 abortus 1, presented in the Out Patient Department of Datta Megha Institute of Medical sciences, with history of diffuse pain in the lower abdomen which had exacerbated since past 4 months. Her medical history was not significant but had history of discomfort in the abdomen intermittently for the past one year for which she had not undergone any investigations in the past. Obstetric history revealed duration of marriage as 26 years with P4L3A1 with history of bilateral tubal ligation done 15 years back and menstural history revealed that menopause was attained five years back. On clinical examination, General Condition of the patient was Fair and She had a pulse rate of 110/min, regular in rhythm and normal in volume with blood pressure reading of 130/80mmhg. Taken in the right arm in supine position, pallor was present. Rest of the general examination was normal.

On systemic examination-Abdomen examination revealed globular abdomen with slit like umbilicus, mild tenderness over the epigastrium, with shifting dullness and fluid thrill present suggestive of fluid in the abdomen, respiratory examination revealed tracheal shift towards the right side with decreased breath sound over right infra mammary area, cardiovascular and central nervous system examination were normal. Per Speculum examination revealed healthy cervix and vagina. Per vaginum examination showed that uterus could not be palpated and bilateral fornices tenderness was present. Laboratory investigations revealed Serum CA 19-9 (Carbohydrate Antigen 19-9) was 600U/mL (normal-<37) and CA125 level were 500U/ml (normal-<35). Chest X ray revealed Right Sided Pleural Effusion (Fig.1).

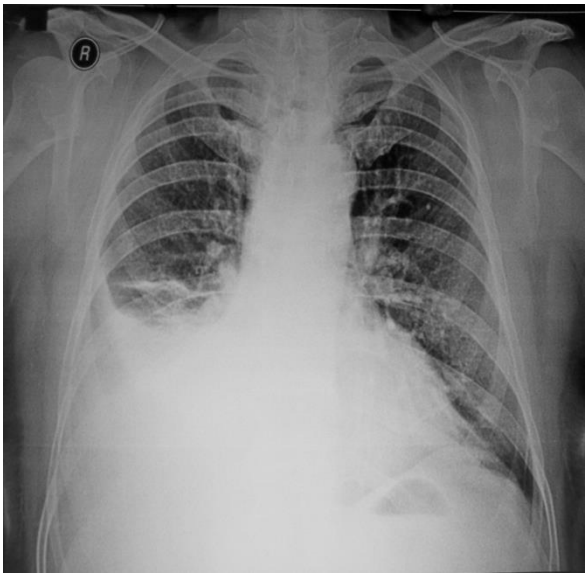

Figure 1 showing right sided pleural effusion

Contrast Enhanced Computed Tomography was done which was suggestive of irregular heterogeneously enhancing thickening in posterolateral wall along greater curvature of body and pylorus of stomach measuring over a length of 8.3 cm and maximum thickness of 2.8 cm causing luminal narrowing (Figure 2) and an solid cystic ovarian lesion in bilateral adnexa, on the right side measuring 5.8 x 4.9 x 4.4 cm and on the left 4.2 x 3.3 x 2.2 cm showing intense post contrast enhancement of solid component (Figure 3). The CECT final impression revealed carcinoma of stomach with bilateral ovarian masses suggesting Krukenberg tumor and right adrenal metastasis with ascites. Esophagogastroduodenoscopy was done which revealed large ulceroproliferative infiltrative lesion extending to the distal proximal part. Stomach was deformed and less distensible. Biopsy was taken which showed adenocarcinoma microscopically (Fig. 4).

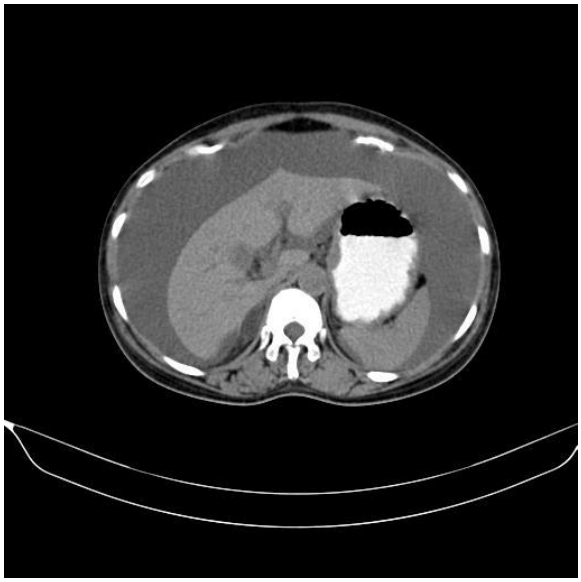

Figure 2 CECT showing irregular heterogeneously enhancing thickening in posterolateral wall along greater curvature of body and pylorus of stomach

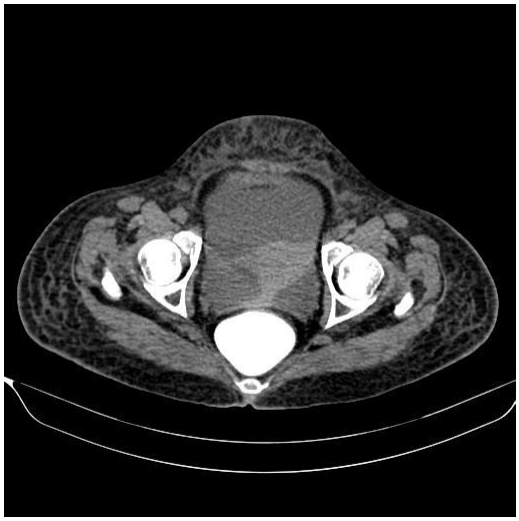

Figure 3 CECT Showing solid cystic ovarian lesion

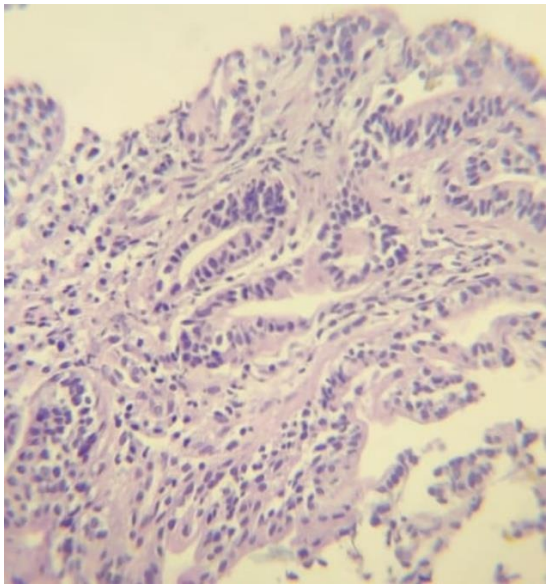

Figure 4 Showing Adenocarcinoma of the stomach on Histopathology

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The CT scan showed no evidence of peritoneal metastasis and cytological examination of pleural and ascitic fluid showed no malignant cells. Due the discomfort and pain caused due to the tumour, bilateral salpingo-oophorectomy was done in view of palliation along with removal of ascitic fluid without any neoadjuvant chemotherapy. Histopathology revealed Mucin-Rich Signet Ring Adenocarcinoma suggestive of krukenburg tumour (Fig.5). Post-oophorectomy the pleural effusion subsided immediately suggesting the diagnosis of Pseudo-Meig's Syndrome. After the bilateral salpingo-oopherectomy patient was started chemotherapy with TS-1/CDDP therapy and is currently on follow up.

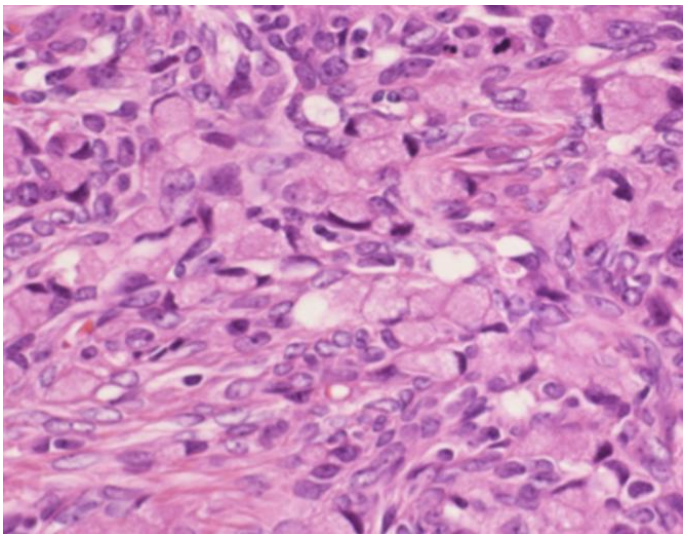

Figure 5 Signet Ring Adenocarcinoma Suggestive of Krukenburg tumour of the ovary on Histopathology

3. DISCUSSION

Meig's syndrome was described in the year 1937 for the first time comprising of an ovarian tumour of benign nature, ascites and pleural effusion. Meigs' syndrome was first identified by Demons of France and Lawson Tait of England, but it was named after Meig. It is characterised by a benign strong ovarian tumour that is usually a fibroma, ascites and hydrothorax (normally right sided). Ascites, hydrothorax and pyrexia (if present) can be synonymous with pyrexia and, characteristically, resolve spontaneously and permanently following tumour removal (Dick et al., 1950). Meig's syndrome is distinguished from Pseudomeig syndrome by the histology of the primary tumour (Meigs et al., 1954). Meig named Pseudomeig's to any pelvic pathology other than benign ovarian tumours that result into similar clinical picture. First case of Pseudo Meig's syndrome was reported in 1950 caused due to gastric tumour (Cetin et al., 2005). The source of the ascites is not clearly understood however it may be peritoneal exudates that result from the irritation by the tumour, due the degeneration which occurs inside the tumour mass or due to various chemical mediators secreted by the tumour. This ascitic fluid is responsible for the hydrothorax when combined with diaphragmatic defects. Reports show that resection of ovarian tumour may not only provide palliative benefits but also increased the survival in patients of pseudo meigs syndrome (Okazaki et al., 2009). The reason for this improvement in survival rate is however unknown and is a domain for further research.

4. CONCLUSION

Meig's syndrome usually has good prognosis with minimal long term health problems. Pseudomeig's syndrome has similar clinical appearance with malignant tumours which in our case was gastric adenocarcinoma. The recognition of this syndrome requires a thorough knowledge and analysis with precision along with confirmation of diagnosis histopathologically. Prompt diagnosis permits for appropriate management with resection of ovarian tumours which might provide palliative benefits along with some marginal improvement in survival time for the patient.

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Conflict of interest

The Authors have no conflicts of interest that are directly relevant to the content of this clinic-pathological case

Financial Resources

There are no financial resources to fund this study

Informed Consent

Informed Consent was obtained from the patient.

Author's Contribution

All the authors contributed equally to the case report.

Data and materials availability

All data associated with this study are present in the paper.

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