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Case Report

Incarcerated Umbilical Hernia as an Initial Presentation of Advanced Ovarian Malignancy

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Abstract

Ovarian malignancy presenting as emergency with incarcerated umbilical hernia is extremely rare. Hernia repair and definitive surgery for the malignancy can be done at the same sitting if it is operable. In advanced inoperable cases, definitive surgery should be planned at a later stage after thorough evaluation and pre-op chemotherapy by the specialized team.

ABBREVIATIONS

CA: Cancer Antigen; CEA: Carcino Embryonic Antigen; AFP: Alpha Fetoprotein; CT: Computerized Tomography

INTRODUCTION

Incarcerated umbilical hernia is a surgical emergency owing to complications such as rupture and strangulation of the hernia content. The usual contents of hernia sac include omentum, small and large bowels. Intra-abdominal tumors presenting as strangulated umbilical hernias are extremely rare [1]. The underlying mechanism is the increased intra-abdominal pressure which then causes umbilical herniation. We report a case of metastatic ovarian cancer presenting as strangulated umbilical hernia.

CASE PRESENTATION

A 66 year old woman was admitted to the emergency department at midnight with acute onset of pain and blood stained discharge from a pre existing umbilical swelling of three weeks duration. She had no known comorbidities. The patient was evaluated by the surgical team. On examination, she was alert and conscious with stable vitals. Abdomen was obese, soft with an umbilical swelling of 4x3 cm size with a punctum at 7 O'clock position discharging blood stained fluid. The overlying skin was red, indurated and tender. Cough impulse was positive. Because of a strong clinical suspicion of strangulation of umbilical hernia, the patient was taken for emergency surgery by surgeons without any further diagnostic imaging.

During the surgery, the hernia sac was found to contain incarcerated tumor mass from the omentum. Hernia sac was excised and repair done by Mayo closure. Incision was then extended to a midline laparotomy for further exploration. Peritoneal cavity contained moderate amount of ascitic fluid which was taken for cytology. Gynae on call team was called in for further evaluation at this stage. Large omental cakes and multiple tumor deposits in the peritoneum and serosa of bowel were noted. Both ovaries and the distal end of the fallopian tubes were buried beneath the uterus with the bowel forming an inseparable mass. Bladder was pulled up and stuck to the anterior wall of the uterus with tumor deposits between them. Multiple tumor deposits were felt on the surface of liver. Optimum debulking surgery was not possible at that stage due to the extensive inoperable disease with liver metastasis. Hence excisional biopsy was taken from the omental cake and abdomen was closed. Detailed history during the postoperative period revealed vague chronic abdominal pain and constipation for the past three months.

Investigations in the postoperative period showed Hemoglobin of 11.5g/dl, CA 125 1033 KIU/L, CA 19-9 13KIU/L, CEA 0.8µgm/L and AFP 3 KIU/L. Histopathology of the umbilical nodule revealed metastatic high grade serous papillary carcinoma (Figure 1 & 2).

Staging CT showed a heterogeneous soft-tissue mass measuring 9.8x9 cm in the pelvis predominantly in the midline recto-uterine pouch with extension into the left adnexa. There was moderate ascites and evidence of omental caking as well as a large lymph node in the aortocaval region at the level of portahepatis. Prominent lymph nodes in the anterior pericardial region and the left inguinal region were noted. No evidence of metastatic disease in the lungs.

She received 6 cycles of chemotherapy with carboplatin and

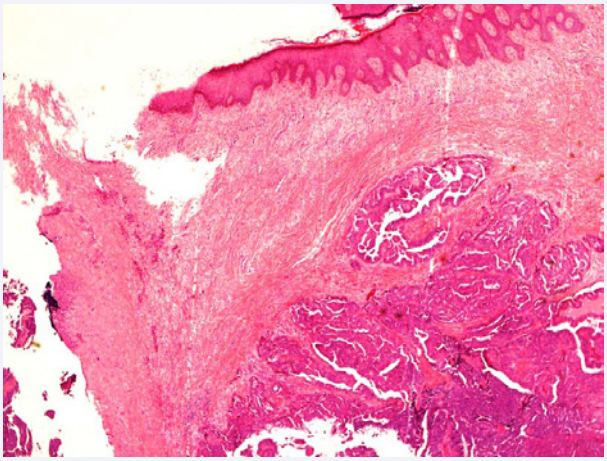

Figure 1 4 X magnification H and E stained section showing skin with underlying tissue, there is a neoplastic process in the deep dermis showing papillary structures lined by atypical cells.

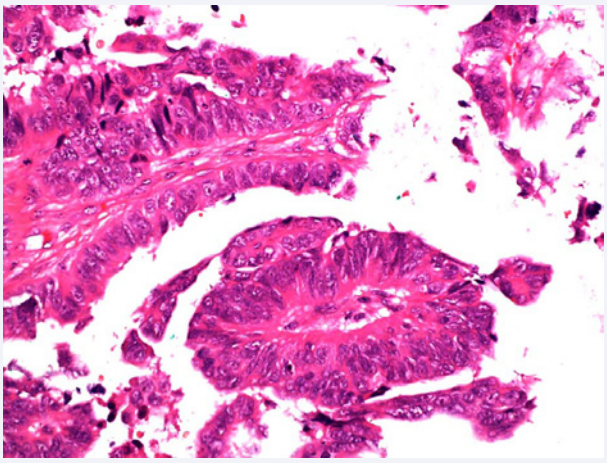

Figure 2 40 X magnification H & E stained section showing papillary structures lined by pleomorphic cells.

paclitaxel followed by interval debulking by the Gyne Oncologist. One year after the initial surgery she is doing well and is under regular follow up.

DISCUSSION

Umbilical hernias constitute 8-12% of all abdominal wall hernias [1]. Majority of them are acquired defects and are frequently associated with conditions causing chronic increase in intra-abdominal pressure. The usual contents of the hernia sac are omentum, small and large bowel. Uncommon contents of the sac include endometriotic cyst, strangulated Meckel's diverticulum and perforated acute appendicitis [2]. Uludag et al has reported a case of incarceration of umbilical hernia during pregnancy due to a sessile fibroid [3].

Malignancies associated with umbilical hernia is very rare and is estimated to be less than 0.1% [4]. The first report of a reducible umbilical hernia with an ovarian tumour was by Miller and associates in 1975 [5]. Hernia sac as big as 15x10cm containing a granulosa cell tumour of ovary has been reported in 2009 by Zulfikar and colleagues [6]. However, there are only very few reported cases of incarcerated umbilical hernias with malignant ovarian tumours. A similar case as ours was reported by Bender and Schmidt in 2002 of a metastatic ovarian cancer presenting as incarcerated hernia [7].

The management of such cases includes conversion to staging laparotomy and cytoreductive surgery if operable, along with primary hernia repair. Inoperable cases should have excisional biopsies for histopathological diagnosis. Definitive management of such cases can be done by the specialized team at a later stage after full work up and pre operative chemotherapy if indicated as in our case.

CONCLUSION

Tumour masses should be considered as a content of incarcerated umbilical hernia, though it is rare. In cases of advanced ovarian cancer presenting as incarcerated umbilical hernia, definitive surgery should be planned at a later stage by the specialized team after thorough evaluation and optimization.

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