

CASE REPORT

Massive Intra-abdominal Mass: A Surgical Challenge*Dnyanesh M. Belekar^{1*}, Madhavi Gosavi¹, Kanchanmala Ghorpade²**¹Department of Surgery, ²Department of Pathology, Terna Medical College & Hospital, Nerul, Navi Mumbai-400706 (Maharashtra) India***Abstract:**

Serous Ovarian Cystadenomas usually present as bilateral small to medium size intra-abdominal mass. Massive intra-abdominal masses are commonly mucinous cystadenomas or mesenteric cysts. Patients with massive intra-abdominal masses present with pain in abdomen and symptoms of discomfort due to the huge swelling. Postural hypotension, intestinal obstruction, cardio respiratory embarrassment is few other presenting symptoms. Asymptomatic intra-abdominal massive tumors are unusual. We report a case of a female with a massive intra-abdominal mass with clinical suspicion of mesenteric cyst or ovarian mass. Huge intra-abdominal mass with no symptoms of cardiovascular compromise and difficulty in pinpointing the organ of origin preoperatively make this case interesting.

Keywords: Massive, Intra-abdominal, Mesenteric, Cystadenoma, Ovary

Introduction:

Massive intra abdominal masses pose diagnostic as well as surgical challenges. It is difficult to come to a pre-operative diagnosis of the organ of origin if the intra abdominal swelling is huge. Surgically the technical difficulty of the procedure as well as maintenance of the volume balance pre operation, intra-operation and post operation can be a tough job.

Case Report:

36 year old Nepali female was presented with a gradually increasing abdominal swelling over the period of one and a half yrs and was admitted with

us with the complaint of discomfort due to the swelling. She had no other complaints and no contributory family history. She was short stature and weighed 51 kilograms. On examination, her vital parameters were Within Normal Limits (WNL). Per abdominal examination revealed a massively distended abdomen with dilated veins over it. The patient did not have edema of face or feet. The swelling was occupying the whole of the abdomen and pelvis. Her air entry was reduced in both basal zones however respiratory rate was normal.



Fig. 1: Massively Distended Abdomen due to Tumor

On investigating, her hemoglobin was 12.8 gms%, Beta Human Chorionic Gonadotropin (HCG), Carcino Embryogenic Antigen (CEA), Cancer Antigen(CA 125), Hepatic and renal profile were WNL. Ultrasonography of the

abdomen showed a massive cystic swelling and rest of the organs were WNL. CT scan of abdomen revealed a cystic homogenous mass of 38.5cms x 35.7cms x 27.6cms occupying the whole of abdomen and pelvis. No areas of calcification were seen. Compression of bowel loops present, septation present in the right lower abdomen suggested to be ovarian in origin.

X-Ray chest showed elevation of domes of diaphragm with prominent broncho-vascular markings. A differential diagnosis of giant



Fig. 2: CT Image showing a Large Homogenous Mass

mesenteric cyst and ovarian mass was kept in mind. The patient was prepared pre-operatively with good diet, chest physiotherapy and antibiotics. Gynecologist standby was requested and the patient was taken up for surgery under general anesthesia with two wide bore peripheral vascular lines in place. A vertical midline incision from the xiphisternum to the symphysis pubis was taken and peritoneal cavity was entered. The swelling was supported and delivered out of

incision. It was a well encapsulated massively large swelling with dilated veins on its surface. Transverse colon was stretched across the swelling. Swelling was arising from right ovary. Right fallopian tube, uterus and left adnexa were normal. Both domes of diaphragm were highly pushed up. The swelling was dissected free from all structures. The adhesions to the right adnexa were clamped, cut and ligated. Specimen was extracted in Toto achieving hemostasis and a tube drain was placed in the pelvis. Abdominal wall was reconfigured and the wound was closed in a single layer. Total estimated blood loss was 1.5 liters. The cyst weighed a massive 24 kilograms!!



Fig. 3: Massive Cystic Tumour after its Extraction.

Post operatively, a central line was secured and patient was extubated and shifted to Intensive Care Unit (ICU). The haemoglobin of patient was dropped from 12.8 gm % pre-operatively to 8.2 gms %. Patient went into hypovolumic shock and early Disseminated Intravascular Coagulation (DIC). After immediate medical consultation she was started on nor-adrenaline drip and Vitamin K. DIC was controlled with the help of three whole Bloods and 2 PCVs, 11 FFPs and 2 platelets given over a period of five days. Daily drain output started reducing from 1500cc of frank blood to

less than 100cc of sero-sanguinous discharge from 8th post operative day onwards. During this period the patient was fully conscious and on oral liquids. Noradrenalin support was withdrawn by third post operative day. After patient was stabilized hemodynamically by sixth post operative day, she was shifted to the ward. Chest physiotherapy was continued. Patient was mobilized put on high protein diet supplemented with iron, vitamins and minerals. The patient recovered completely, suture removal was done and patient was discharged from the hospital on 23rd post operative day.

On gross it was a unilocular cystic mass with no solid areas. The histopathology showed large cyst lined by cuboidal to low columnar epithelium with metaplastic changes in form of ciliated pseudostratified columnar and mucinous epithelium confirming serous cyst adenoma of ovary. Patient was advised regular follow up of 6 months.



Fig. 4: Histopathology Features showing Serous Cystadenoma of Ovary.

Discussion:

Serous cyst adenomas of ovaries though commonest surface epithelial tumour (represent 40% of all ovarian masses) are usually bilateral and multi-loculated. Most of them are benign but approximately 10% have malignant potential and 20 to 25% are malignant depending upon the presenting age of the patient [1]. Benign mucinous cyst adenomas usually present in giant form and are among the largest known tumours. Giant tumours of the ovaries have been reported in the literature Spohn *et al* have reported an abdominal cyst of 148.6kgs or 328 lb [2] Symmonds *et al* have reported an removal and ovarian mass that weighed 79.4 kg or 175lb. The newer imaging modalities have made such giant tumours a rarity, however intermittently such cases of giant tumours have been reported [1]. Our patient presented late as she was under the misimpression of being pregnant and later while she was being worked up in a hospital at Nepal, the earthquake in their country further delayed her treatment.

Patients with such giant tumours usually give rise to cardio respiratory compromise, supine hypotension syndrome due to compression of inferior vena cava [3]. Literature has also reported that giant tumours with no cystic component have been drained preoperatively and Intra operatively to prevent splanchnic shock intra-operatively due to sudden release of the splanchnic vascular bed with the removal of the mass [4]. The cysts are removed in Toto as the leakage of cyst fluid in to the peritoneal cavity can give rise to pulmonary

edema [5]. Post operative pulmonary complications are also common due to sudden relaxation of the abdominal and diaphragmatic musculature [6]. Low transverse incisions are also reported in the literature to reduce the risk of ventral hernia and for restoration of abdominal muscle function [7].

Our patient was asymptomatic however she went in early DIC due to massive blood and volume loss during the surgery. It was effectively controlled and the patient was discharged without any

physical liability. Hence such massive intra-abdominal tumours should be resected intact with minimum blood loss and intensive intra-operation and post operative monitoring will give the best results surgically and reduce complications in the patient. Meticulous follow up of these patients with ultrasonography of abdomen once in six months should be done. Overall prognosis of this condition is good. A new approach to massive abdominal tumours using immediate abdominal wall reconstruction.

References

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**Author for Correspondence: Dr. Dnyanesh Belekar, Department of Surgery, Terna Medical College & Hospital, Nerul, Navi Mumbai-400706, Maharashtra, India Email: dnyaneshbelekar@yahoo.co.in Cell: 09820055482*