

## Malignant Gastrointestinal Stromal Tumour Presenting as Ovarian Cyst

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### Abstract

A rare case of malignant gastrointestinal stromal tumour presenting as ovarian cyst on clinical and radiological diagnosis is discussed with its presentation and management.

### Key Words

Ovarian cyst, Gastrointestinal stromal tumour

### Introduction

Cystic enlargement of one or both ovaries can occur commonly and is regarded as physiological, this enlargement never exceeds beyond a normal range (5 cm) the condition is referred to as "Ovarian Cyst" (1). Majority of ovarian cysts are symptomless but it is often stated that an ovarian cyst may cause pain in iliac fossa. Also if an ovarian cyst is buried in peritoneal adhesions or undergoes torsion it causes pain (2).

It is important to rule out malignancy in an ovarian cyst/mass which is more than 5 cm and or increasing in size. This is usually diagnosed either by clinical examination or on ultrasound (3). Masses of non-ovarian origin in pelvic sites may result from carcinoma of rectum, appendix, bladder or rarely colon and small intestine (4). These may pose a problem in pre-operative diagnosis. This case is a rare presentation of such

diagnostic dilemma with variation in ultrasonographic and clinical diagnosis to operative findings.

### Clinical History

A 15 year old young female presented with pain in the left lower abdomen for the last one month. This pain was intermittent without radiation to any site and was mild to moderate in severity. She had menarche at the age of 14 years (one year prior to these symptoms). However her menstrual history was apparently normal. General physical and systemic examination was normal. Abdominal examination revealed a lump of about sixteen weeks uterus size, firm to feel and non-tender. Her weeks uterus size, firm to feel and non-tender. Her biochemical and haematological parameters were normal. Ultrasonogram abdomen and pelvis revealed a large mixed echogenicity mass 10.5×8.0 cm on left side

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in the lower abdomen; anterior to bladder with cystic and solid components. A preoperative diagnosis of ovarian cyst was kept in mind.

Patient underwent laparotomy which showed no ascites, 10×8 cm tumour with soft consistency and increased vascularity was adherent to omentum and was arising from the antimesenteric border of the gut, forming adhesions with outer surface of left fallopian tube and broad ligament. Uterus and both ovaries were normal.

Tumour was removed enmass with its capsule intact. The walls of the small gut were repaired in layers. There were no palpable lymph nodes or nodules under the dome of diaphragm. The histopathology showed a malignant gastrointestinal tumour and patient was subsequently given six cycles of anthracycline based combination chemotherapy in following regimen :

|                   |                         |   |                               |
|-------------------|-------------------------|---|-------------------------------|
| Inj Epirubicin    | – 50 mg/m <sup>2</sup>  | } | I/v D <sub>1</sub> × 3 weekly |
| Inj Cisplatin     | – 60 mg/m <sup>2</sup>  |   |                               |
| Inj 5-Flurourocil | – 500 mg/m <sup>2</sup> |   |                               |

Presently patient has completed her treatment and she is clinically disease free. Her latest ultrasound abdomen is grossly normal.



**Fig. 1. Low power view showing blood vessels (Arrows) surrounded by tumour cells (x10).**



**Fig. 2. High power view showing sheets of small spindle shaped tumour cells (x40).**

**Discussion**

An adenexal mass may be of gynaecological or non-gynaecological origin. It is important to establish whether or not the mass is ovarian in origin and to understand that a mass causing an ovary to enlarge to greater than 5 cms in diameter should be considered potentially malignant until proved otherwise.

However, sometimes a clinicopathological surprise may be there due to long list of differential diagnosis Table I (4).

| Classification of Adnexal mass   |   |
|--|---|
| Gynaecological Origin  | Non-Gynaecological Origin   |
| <p><b>Non-Neoplastic :</b></p> <p><b>Ovarian :</b> Physiological cyst<br/>Follicular cyst<br/>Corpus luteum cyst</p> <p>Polycystic ovaries</p> <p><b>Non ovarian :</b></p> <p>Ectopic pregnancy<br/>Congenital anomalies<br/>Embryologic remanants.</p> <p><b>Neoplastic :</b></p> <p>– Ovarian tumour<br/>– Leiomyoma<br/>– Parovarian cyst<br/>– Tubal Carcinoma</p> | <p><b>Non-Neoplastic :</b></p> <p>– Appendiceal abscess<br/>– Diverticulosis<br/>– Peritoneal cyst<br/>– Pelvic kidney<br/>– Urachal cyst<br/>– Anterior sacral meningocele</p> <p><b>Neoplastic : G.I. tumours</b></p> <p>Carcinoma – Sigmoid<br/>– Caecum<br/>– Appendix<br/>– Bladder</p> <p>Retroperitoneal neoplasm<br/>Presacral teratoma</p> |



In the present paper, we had a case of palpable mass. left lower abdomen with ultrasonographic diagnosis of ovarian cyst which on laparotomy turned out to be a tumour arising from gastrointestinal tract. The histopathological diagnosis of malignant gastrointestinal stromal tumour was offered. Malignant gastrointestinal stromal tumours are rare and comprise approximately 9% of all gastrointestinal tumours and 11% of all malignant tumours (5-7). These tumours can present with several symptoms depending on their growth pattern. Endocentric lesions may present as bleeding or obstruction, whereas ectocentric tumours may present with pain or palpable lumps. The diagnosis may be suggested by upper gastrointestinal series with or without abdominal CT scan but it is rarely made pre-operatively. Our case also had difficulty in preoperative diagnosis.

Surgical management includes wide resection of the primary tumour with adjacent structures if invaded. Extended lymphadenectomy is unnecessary, because these tumours involve regional lymph nodes in fewer than 15% of cases (9-10).

The prognosis depends on tumour size, histologic grade, local invasiveness and resectability (9-13). Our patient had complete resection of tumour. Peritoneal and liver metastasis are the most common causes of treatment failure. Standard treatment after surgery for locally invasive or metastatic disease is anthracycline based combination chemotherapy. Although, the response rates are as high as 40% but there is no evidence that adjuvant chemotherapy or radiation therapy after complete resection diminishes the risk of subsequent relapse (14). Our patient also received combination chemotherapy and is presently disease free.

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