

OVARIAN ENLARGEMENTS IN ADOLESCENTS AND TEENAGERS

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SUMMARY

The present study is based on twelve cases of ovarian enlargements requiring surgical intervention in young adolescents and teenagers over a twenty five years period. Three of these were non-neoplastic in origin, they were due to a large tubo-ovarian tuberculous abscess, sterile abscess following mumps and a chocolate cyst of the ovary. Four cases were attributed to benign conditions like simple serous cyst, bilateral theca cell tumours and two cases of dermoid cysts in the ovaries. The remaining five cases were due to a case of malignant teratoma, a dysgerminoma, two cases of endodermal sinus tumour and one case of embryonal carcinoma.

INTRODUCTION

Ovarian neoplasms, though rare in young adult girls, constitute the most common neoplasms of the genital tract.

Germ cell tumours predominate in childhood and adolescence, and account for over 60% of the cases, Epithelial tumours increase in frequency as age advances. Many of these tumours are malignant and run a rapidly lethal course. Since the tumours are relatively uncommon, a lot of controversy and difference of opinion exists in the management of these tumours.

MATERIALS AND METHODS

A review of the gynaecological cases over the past twenty-five years (1965-1990) revealed

twelve cases in whom a laparotomy was undertaken in young girls below the age of twenty years for ovarian enlargement and clinical suspicion of tumour. Three of these cases ultimately turned out to be non-neoplastic, and out of the remaining nine cases, Germ cell tumours accounted for 5 cases. Details of these cases are presented.

OBSERVATIONS

During the study period of twenty-five years (1965-1990), Sixty eight women had undergone laparotomy for ovarian neoplasms of which nine cases occurred in girls aged twenty years or younger. Thus 13.2% of all ovarian tumours were seen in young girls.

PRESENTING SYMPTOMS

Ovarian tumours in young girls present with

the two most common symptoms of pain and abdominal mass. The small pelvic cavity causes most ovarian tumours to rise above the pelvic brim and present as abdominal swellings. Acute symptoms like severe abdominal pain, vomiting and occasional rise of temperature may be due to torsion, peritoneal irritation, haemorrhage, perforation or rupture. In the present series, the symptomatology was as mentioned in Table I.

PATHOLOGY OF OVARIAN SWELLINGS

After laparotomy, the ovarian enlargements were attribute to the following pathology as listed in Table II.

Clinical Features of Ovarian Swellings and their management

These will be discussed in three headings according to the above mentioned pathology.

Table - I

Presenting Symptoms

Symptoms	No. of cases	%
Abdominal mass	10	82%
Abdominal pain	8	75%
Abdominal distension	3	25%
Loss of weight	4	33%
Fever	3	25%

Table - II

Pathology of Ovarian swellings

	No. of cases
A) Non-neoplastic Pathology	
Tuberculous Tubovarian Abscess	1
Ovarian Abscess following Mumps	1
Chocolate Cyst of ovary	1
B) Benign Neoplastic Pathology	
Bilateral Dermoid Cysts	1
Unilateral Dermoid Cyst	1
Simple Serous Cyst	1
Benign Bilateral Thecoma	1
C) Malignant Neoplastic Pathology	
Embryonal Carcinoma	1
Mature Malignant teratoma	1
Dysgerminoma	1
Endodermal sinus tumour	2

Group A : In this group there were three patients with non-neoplastic ovarian pathology mimicking an ovarian tumour. The salient features were as follows :

Case 1 : Miss P.R. aged 18 years presented with well defined lump in the lower abdomen corresponding to a 20 weeks gestation size uterus, pain in lower abdomen off and on, a low grade temperature, and primary amenorrhoea, plain X-ray of lower abdomen revealed only a soft tissue shadow; pregnancy test was negative. Exploratory laparotomy revealed a large right side tubo-ovarian abscess with tubercles on the peritoneum, bowel serosa and omentum. The abscess was drained and abdomen closed. The patient responded well to antikoch's therapy.

Case 2 : Miss N.B. aged 16 years presented with enlargement of lower abdomen, chronic lower abdominal pain and low grade fever. Clinically a mass was palpable in the lower abdomen, it was mildly tender, but not freely mobile. On rectal examination, the uterus could be separately identified.

At laparotomy the right ovary was enlarged, about 8.0 cms. in diameter, its lower wall was adherent to the pouch of Douglas and posterior

uterine wall. On attempting to separate the mass, it broke open and thick chocolate material come out. The ovarian mass was excised, and the ovary repaired. The patient was initiated on danazol therapy.

Case 3 : Miss R.B. aged 17 years was admitted with left abdominal pain of 2 years duration, the pain was dull, aching and occasionally accompanied by vomiting. She had irregular menstrual cycles, she gave h/o mumps 2 years earlier.

On pelvic sonography the left-ovary showed an enlargement of 5 cms. x 6.0 cm. x 4.8 cm. with a suggestion of a thick walled cyst. On conservative treatment and observation, the mass persisted.

At laparoscopy, the left ovary appeared enlarged, congested with a few flimsy adhesions. At laparotomy, this ovary was excised, it contained a central cavity with pus. The ovarian wall showed evidence of chronic inflammation. This was an interesting case of a chronic ovarian abscess following mumps.

Group B : The clinical features and managements of non-malignant ovarian neoplasms are given in Table III.

Table - III

Clinical Features and Management of non-malignant neoplasms of the ovary

Case No.	Age	Pathology	Special clinical Feature	Management
1	14	Bilateral Dermoid cyst	- Pain in abdomen - Menstrual irregularity	Excision of left ovary Enucleation of Dermoid right-ovary
2.	17	Unilateral Dermoid cyst	- Acute abdominal pain - Lump in abdomen	Torsion of right ovarian dermoid cyst. Excision undertaken.
3.	18	Simple serous cyst	- Abdominal enlargement	Enucleation of cyst
4.	20	Bilateral thecomas with pregnancy	- Ovarian enlargements diagnosed during pregnancy	C. section at term with excision of bilateral tumours

Group C : The clinical features and management of 5 cases of malignant ovarian neoplasms are given in table IV.

girls aged 17 and younger. Sawai and Sirsat (1973) at the Tata Memorial Hospital in Bombay recorded an incidence of

Table - IV

Case No.	Age	Pathology	Clinical Feature	Management
1.	13	Embryonal carcinoma	Enlargement of Abdomen, pain, rapid weight loss	Laparotomy. Diffuse inoperable growth of ovary. Only Biopsy taken. Patient died 3 months later.
2.	14	Malignant Teratoma	Lump in abdomen Primary Amenorrhoea	Unilateral free mass 6" diameter in left ovary unilateral salpingo-oophorectomy. Patient died 6 months later due to liver metastasis.
3.	19	Dysgerminoma	Lump and pain in abdomen	At laparotomy unilateral salpingo-oophorectomy performed. Patient had 2 normal deliveries and is alive and well after 22 years.
4.	17	Endodermal sinus tumour	Lump in abdomen. Pain in abdomen. Irregular vaginal bleeding.	Exploratory laparotomy, and unilateral salpingo-oophorectomy. She went downhill and died in 3 months.
5.	15	Endodermal sinus	Lump in abdomen Distension Occasional vomiting	Exploratory laparotomy. TAH with BSU, Followed by radiation therapy in 1972. Patient died 1½ years later.

DISCUSSION

Ovarian tumours account for approximately 1% of all malignant neoplasms, during childhood and adolescence (Young and Miller: 1975).

In their series of 26 cases of ovarian tumours in children, Oumachigui et al (1990) observed that 6% of all ovarian tumours were recorded in

11.2% for ovarian tumours in girls under the age of 20.

Sahu et al (1990) recorded 19 cases of germ cell tumours out of 46 cases in girls aged 20 years or younger.

In the present series of the 68 ovarian neoplasms 13.2% occurred in girls aged 20 years and

below.

Abdominal mass and pain were the two most frequently encountered symptoms in the present series. These were observed in 82 and 75% of the cases in the present series.

Oumachigui et al (1990) observed the presence of abdominal mass in 80% and abdominal pain in 72% of their cases.

Shah et al (1991) observed the presence of a mass in 65% of their cases and abdominal pain in 70% of the patients.

Germ cell tumours, as a group were encountered in 7 out of the 9 cases i.e. 77% in the present series.

Oumachigui et al (1990) reported the incidence of 92% germ cell tumours in their series of 26 cases.

Sawai and Shirsat (1973) reported 77.5% of ovarian tumours under the age of 20 years to be germ cell tumours.

Sahu et al (1990) reported that 27.5% of all ovarian tumours were germ cell tumours.

Breen and Maxson (1977) in a large review of 1002 ovarian tumours reported the incidence of germ cell tumours to be 67.2% in adolescents. Lack and Goldstein (1984) reported an incidence of 71% and Rancy et al (1987) of 77.7%.

From the above figures, it is clear that germ cell tumours predominate during childhood and adolescence.

Ovarian tumours in the younger age group are often malignant, and can be lethal in a short time. In the present study, 3 of our patients died within 2 years of surgery.

In the treatment of ovarian tumours during adolescence, most authors tend to be conservative and attempt to save the reproductive func-

tions, whenever possible. In the present study, conservative removal of the tumour was attempted in 6 out of 9 cases. Of these, the 3 patients, with benign pathology had a smooth convalescence, with full reproductive potential preserved.

In the remaining cases, except for the 1 case with dysgerminoma, all the patients died within 2 years.

Today, chemotherapy may alter their prognosis.

Krepart et al (1978) observed that conservative surgery for dysgerminoma is rewarding and Newlands and Bagshawe (1987) and Gallian et al (1988) concluded that if the dysgerminoma is confirmed to one ovary, unilateral ovariectomy should be resorted to.

REFERENCES

1. Breen, L.J. and Maxson, W.S., *Clin. Obstet & Gynec.* 20 : 607, 1977.
2. Gallion, H., Van Negel, H.R., Powell, D.R., *Am. J. Obstet & Gynec.*, 158 : 598, 1988.
3. Krepart, G., Smith, F.P., Rutledge, F., and Delclos, L. *Cancer* : 41 : 908, 1978.
4. Lack, E.E., and Goldstein, D. P. *Current Problems in Obstet & Gynec.*, 1984. Year book Medical Publishers.
5. Newlands, E.S. and Bagshawe, K.D. *Recent Advances in Obst. & Gyn.* 1987. Churchill Livingstone Medical Division, London.
6. Oumachigui, A., Narsasinha, K.L., Reddy, K.S., Narsasinha, R., Bhupattin, A., Rajaram, P., and Chatterjee, H. - *of Obstet & Gynec of India*, 40 : 441, 1990.
7. Rancy, B.R., Sinclair, L., Yuri, I. *Cancer* 15 : 1214, 1987.
8. Sahu, L., Mallik, R.N., Nanda, M., Sethu, C.R., Dash, S. - *Obstet & Gynec. India*, 40 : 446, 1990.
9. Sawai, M.M., Shirsat, M.V. *Indian J. Cancer*, 10 : 302, 1973.
10. Shah, P.K., Shroff, C.P. Deodhar, K.P., and Vaidya, P.R. - *J. Obstet & Gynec. India*, 41 : 397, 1991.
11. Young, J.L. and Miller, R.W. *Paedia*. 86 : 254, 1975.