

MALIGNANT OVARIAN NEOPLASM

BY

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Introduction

The present study, mainly clinical and partly statistical, is based on 54 cases of malignant ovarian neoplasms admitted to the Eden Hospital during the period of four years from 1948-1951. In this group of 54 cases were included only those which were definitely proved to be malignant. There were a few cases of functional tumours of the ovary like granulosa cell tumours and arrhenoblastoma. All these were histologically benign and were well, up to the time of writing. Hence they are excluded. During the same period 12,700 gynaecological cases were admitted to the Eden Hospital, giving an incidence of 1 in 235 or 0.43 per cent. The number of benign ovarian tumours during the same period was 192 — the ratio between malignant to benign ovarian tumours in the present series is thus 1 to 3.5.

Type of Tumour

A perusal of the various text-books and publications, with their many different classifications, at once emphasizes that the nature and origin of many of the neoplasms are still shrouded in uncertainty, and therefore any classification must of neces-

sity be partial and provisional. Hence no attempt is made to follow any particular classification — instead mention is being made of the various types based on histological diagnosis. The following types of tumours were seen in the present series:—

	per cent
1. Cyst-adeno-carcinoma ..	23 or 42
2. Solid Adeno-carcinoma ..	8 or 15
3. Sarcoma ..	7 or 13.1
4. Krukenberg's tumour ..	4 or 8
5. Dysgerminoma ..	4 or 7
6. Teratomata ..	8 or 15

In 33 or 61 per cent of cases, the tumour was bilateral and in 21 or 39 per cent of cases, the tumour was unilateral, giving a ratio of bilateral to unilateral tumours as 3 to 2.

Clinical Features

Age.

TABLE I
Age

Years.	Cases		
	No.	Per cent.	
15-20	6	11.1	} 22.2
21-25	6	11.1	
26-30	—	—	} 77.7
31-35	3	5.5	
36-40	12	22.2	
41-45	3	5.5	
46-50	3	5.5	
51-55	15	28.0	
56-60	3	5.5	
60 +	3	5.5	

Age of the youngest patient, 18 years.

Age of the oldest patient, 65 years.

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It appears that excepting the very young patient, no age is exempt from malignant disease of the ovary. As will be seen from the table, there was not a single case before the age of fifteen years. The whole series of cases could be broadly divided into two groups—one before the age of twenty-five years and the other after the age of thirty years. Twenty-two per cent, or roughly one fifth of the cases were seen before the age of twenty-five years and seventy-seven per cent, or three-fourths of the cases, occurred in patients who were beyond the age of thirty years. When, however, cases are considered in five year age groups the largest number of cases occurred between fifty-one to fifty-five years, viz. twenty-eight per cent or roughly a little less than one-third of the total number of cases. The age of the youngest patient was eighteen years and that of the oldest was sixty-five years.

Parity.

TABLE II
Parity

Parity.	Cases.		
	No.	Per cent.	
0	9	21.4	} 50.0
1	6	14.3	
2	6	14.3	
3	3	7.1	
4	3	7.1	
5	1	2.3	
6	2	4.7	
7	1	2.3	
8	2	4.7	
9	4	9.5	
10	2	4.7	
11	1	2.3	
12	1	2.3	
13	1	2.3	

The relation between parity and malignant ovarian tumour in the present series appears interesting. Malignant disease of the ovary seems to be more common in women who are either sterile or who have a low degree of fertility; for, fifty per cent or half the number of cases were either nulliparous or did not have more than two pregnancies. From third para onward, the cases are equally distributed with slight variations in the various parity groups. When individual parity is considered, the largest number of cases occurred in nulliparous women, viz. 21.4 per cent. Parity was mentioned in 42 cases only.

TABLE III
Signs and Symptoms

Symptoms	Cases	
	No.	Percentage
1. Swelling	34	63
2. Pain	27	50
3. Vaginal bleeding	15	27.7
4. Palpitation	6	11.1
5. Dysphagia	3	5.5
6. Bladder symptoms	6	11.1
7. Rectal symptoms	3	5.5
8. Fever	6	11.1
9. General weakness	24	44.4
10. Something coming down p. v.	3	5.5
11. No symptom	3	5.5

Patients suffering from malignant ovarian neoplasm complained of large variety of symptoms such as general weakness, palpitation, dysphagia, dysuria, dyschezia, oedema of the legs, but the most common symptom was swelling in abdomen, being present in 63.4 per cent. This was accompanied by pain in major-

ity of cases (50%). In other words, a painful swelling was the commonest complaint. The duration of the swelling (Table IV) in 70 per cent or 3/4th of cases was within 6 months. Of this 70 per cent, nearly 1/3rd or 23.3% complained of rapid enlargement. In the rest, thirty per cent of cases, the duration of swelling varied between 1-3 years. The shortest duration was one month and the longest was 3 years. The duration of swelling was mentioned in 39 cases.

TABLE IV

Duration of Swelling

Duration	Cases		
	No.	Percentage	
1 month	9	23.0	} 69.1
4 months	3	7.7	
5 months	6	15.4	
6 months	9	23.0	
1 year	6	15.4	
2 years	3	7.7	
3 years	3	7.7	

Next in order of frequency was vaginal bleeding either in the form of menorrhagia or metrorrhagia, being present in 33.3 per cent or 1/3rd of total number of cases. In 3 or 5.5 per cent of cases, the patient did not complain of any symptom, though the tumour was detected on pelvic examination—the so-called asymptomatic group.

Menstrual history was recorded in 45 out of 54 cases (Table V). Sixty per cent of cases were in the premenopausal group and the rest forty per cent in the post-menopausal group. Of the pre-menopausal group,

twenty per cent had normal menstruation. Menorrhagia was present in 20 per cent and metrorrhagia in 13.3 per cent of cases. In 3 or 6.6 per cent of cases there was amenorrhoea and all the patients were in the child-bearing age. There was no question of pregnancy in these cases. Possibly cachexia along with complete destruction of ovaries may be responsible for this amenorrhoea.

TABLE V

Menstruation

Type	Cases	
	No.	Percentage
Normal	9	20.0
Amenorrhoea	3	6.6
Metrorrhagia	6	13.3
Menopause	18	40.0
Menorrhagia	9	20.0

Diagnosis

Diagnosis of malignant ovarian tumour presents certain difficulties as there is no particular sign or symptom which could be regarded as characteristic of this condition. For example, signs and symptoms like a painful swelling, ascites may be produced both by the malignant and benign ovarian neoplasms alike. Pain associated with an ovarian neoplasm may be due to torsion or infection in a benign tumour or due to malignancy. Greatest difficulty in the diagnosis, however, is that cancer of the ovary usually reaches an advanced stage before any symptom of its presence is manifested.

In the present series, the diagnosis

of malignant ovarian tumour before operation was made only in 23 per cent of cases, and in the rest diagnosis was made either on opening the abdomen or on subsequent histological examination of the tumour removed. External appearance of the tumour was of little assistance in the diagnosis of malignancy. For, in 15 cases, roughly 1/3rd in the present series, apparently benign-looking, unilateral pseudomucinous cysts proved to be malignant on histological examination. Ascites, on which much reliance is placed in the diagnosis of malignancy, was present in 56 per cent of cases, i.e. a little more than half the number of cases. The colour of the ascitic fluid varied from clear straw colour to port wine colour. The consistency of the fluid in all cases was thin watery. The amount of ascitic fluid in cases of malignant ovarian tumours was variable and did not bear any relation either to the size of the growth or to the peritoneal involvement. In 7 cases, paracentesis had to be done before the diagnosis of the tumour could be made. Three of these cases required tapping several times for rapid collection of fluid in the abdomen after removal of the tumour. All the three cases were bilateral solid adenocarcinoma with extensive peritoneal involvement. It might be mentioned here that ascites was also found in connection with benign ovarian tumours, both cystic and solid, and in the majority of instances (70 per cent), there was torsion of the pedicle. In a few cases mention was made of hard irregular nodules in pouch of Douglas pointing to metastasis.

Treatment

TABLE VI

Treatment

	Cases	
	No.	Percentage
Inoperable	9	16.6
Unilateral Ovari- tomy:		
Right	9	16.6
Left	6	11.0
Unilateral Ovari- tomy with Hysterectomy:		
Right	6	11.0
Left	Nil	Nil
Bilateral Ovari- tomy with Hysterectomy:	24	44.4

It will be seen from the table that in 24 or 44 per cent, i.e. nearly half the number of cases bilateral ovariectomy with hysterectomy was done. In 6 or 11 per cent of cases unilateral ovariectomy with hysterectomy was done. Hysterectomy in these cases was done for associated fibroids of the uterus. Of 15 cases where unilateral ovariectomy was done, 11 of this number were traced subsequently and were operated upon for the second time between 6 weeks to 3 months for removal of the other ovary along with the uterus.

In 23 per cent of cases where a pre-operative diagnosis of malignancy was made, 9 or 16.6 per cent of cases were found to be inoperable on laparotomy. This was due to extensive adhesions, metastases and in addition in some cases to enormous size of the tumour. In a few cases, where the condition appeared at first sight to be inoperable, with careful dissection and separation of adhe-

sions, the tumour could be removed ultimately. This was only feasible in those cases where patient's general condition was such that it could stand a prolonged operation.

It seems to the author that when on laparotomy a particular tumour is found to be inoperable, instead of closing the abdomen immediately a careful survey of the local as well as general conditions, and facilities for blood transfusion, should be made even though these have not been done before. If conditions would permit one should proceed with the operation. It is surprising, how on rare occasions, an apparently inoperable tumour can be removed ultimately. Mere removal of the tumour under such circumstances without hysterectomy is justifiable. Such a procedure in the opinion of the author merits a serious consideration from the point of view of ultimate prognosis.

Mortality

TABLE VII
Side of Tumour

Side	Cases	
	No.	Percentage
A. Unilateral:		
Right	9	16.6
Left	12	22.3
B. Bilateral:	33	61.1

One patient died within 3 days of admission before anything could be done because of the extremely low condition. Three patients died within 24 hours of operation due to post-operative shock. Five cases were discharged apparently cured after operation, but were re-admitted with-

in two months with cachexia, severe anaemia and ascites and died within a few days.

Post-operative deep X-ray therapy and follow up could be made in a few cases and that even very unsatisfactorily due to the patients failing to report. The ultimate outlook for a woman with carcinoma of the ovary is gloomy and uncertain. Leaving aside the very early group discovered accidentally, once a malignant ovarian tumour causes symptoms the chance for complete and permanent cure with the present methods of treatment is remote. Temporary arrest of the disease for varying periods of time is all that is possible.

Conclusion

- (1) The frequency of malignant ovarian tumour in the present series is 0.43 per cent of all gynaecological cases.
- (2) The ratio between benign and malignant ovarian tumours is 3.5 to 1.
- (3) Malignant ovarian tumours occur at all ages being most common between 36-55 years of age.
- (4) They appear to be more common in women who are either sterile or have a low degree of fertility.
- (5) Painful swelling and vaginal bleeding were the two most common complaints.
- (6) Ascites was present in more than half the number of cases (56 per cent).
- (7) 40 per cent of the patients were in the post-menopausal group.

- (8) In two-thirds of the cases (61 per cent) the tumour was bilateral.
- (9) Prognosis in malignant ovarian neoplasm is gloomy and uncertain.

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