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# OVARIAN MALIGNANT TUMOURS

BY

SUBODH MITRA, M.B. (Cal.), Dr. Med. (Berlin), F.R.C.S. (Ed.), F.R.C.O.G., F.A.C.S., *Director Professor, R. G. Medical College, Director, Chittaranjan Seva Sadan and Cancer Hospital, Calcutta.*

Ovarian tumours are fairly common in India as in any other part of the world. Reviewing the case records of Chittaranjan Seva Sadan during the last quarter of a century (1930-1954), 538 ovarian tumours were found, out of a total number of 23,675 gynaecological cases, i.e., an incidence of 2.3 per cent. On a closer check-up of the case records of the last 5 years (1950-1954), 108 ovarian tumours were found, out of a total number of 4,082 gynaecological cases admitted in the same institute, i.e., an almost similar incidence of 2.6 per cent. A little higher incidence has been found in the R. G. Kar Medical College. During the years between 1942 to 1947 and 1950 to 1954, 209 ovarian tumours were found from 5,096 gynaecological cases, i.e., an incidence of 4.1 per cent. (Table I). These discrepancies are attributed to many unavoidable factors but it can be safely deduced that the incidence of ovarian tumours is about 3 per cent. of all the gynaecological cases admitted in any big institution.

TABLE I

| | Total gynaecological cases | Ovarian tumours. | Per cent |
|---|---|---|---|
| 1. C. S. S. | | | |
| 1930-54 | 23,675 | 538 | 2.3 |
| 1950-54 | 4,082 | 108 | 2.6 |
| 2. R. G. Kar | | | |
| 1942-47 } | 5,096 | 209 | 4.1 |
| 1950-54 } | | | |

Malignant ovarian tumours comprise about 15 per cent. of the total number of ovarian tumours seen in the Chittaranjan Seva Sadan during the aforementioned periods. In the first series 80 cases were found, out of a total number of 538 ovarian tumours, i.e., an incidence of 14.8 per cent., and an exactly same incidence

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in the second series (16 malignant ones out of a total number of 108 ovarian tumours). In the R. G. Kar Medical series, the incidence is definitely higher. Fifty-three malignant ovarian tumours have been found, out of a total of 209 ovarian tumours, i.e., 25.3 per cent (Table II). The incidence, of about 25 per cent. of all ovarian tumours being malignant, corresponds with the figure collected from the world literature. The lower incidence of malignant ovarian tumours in the Seva Sadan can to a certain extent be explained by the fact that a certain percentage of malignant ovarian tumours are admitted directly in the Chittaranjan Cancer Hospital, which is situated in the same campus as the Chittaranjan Seva Sadan.

TABLE II

| | Total ovarian tumours. | Malignant ovarian tumours. | Per cent. |
|---|---|---|---|
| C. S. S. | | | |
| 1930-54 | 538 | 80 | 14.8 |
| 1950-54 | 108 | 16 | 14.8 |
| R. G. Kar | 209 | 53 | 25.3 |

Reviewing the case records of the Chittaranjan Cancer Hospital, the following data have been obtained:

Total number of cancer cases in women .. 3,623
Total number of genital cancer in women .. 2,018
Total number of malignant ovarian tumours .. 68
Total number of cancer of the cervix and corpus .. 1,868
Total number of cancer of the breast .. 416

It can be found out from the above figures that ovarian cancer forms 1.87 per cent of all cancer in women and 3.36 per cent of all genital cancers.

TABLE III

*Chittaranjan Cancer Hospital, 1950-1954.*

| | Total | Malignant ovarian tumours. | Per cent. |
|---|---|---|---|
| All cancer cases in women: | 3,623 | 68 | 1.87 |
| All genital cancers: | 2,018 | 68 | 3.36 |

The ratio of malignant ovarian tumours to cancer of the cervix is 1 : 27, and to breast cancer is 1 : 6.

TABLE IV

*Chittaranjan Cancer Hospital 1950-1954*

| | Total | Malignant ovarian tumours. | Per cent. |
|---|---|---|---|
| Cancer of cervix and corpus | 1,868 | 68 | 27.1 |
| Cancer of breast | 416 | 68 | 6.1 |

I am afraid these figures do not give a true picture of the comparative incidence, as a considerable number of carcinomas of the cervix are referred to this institution either for radiation therapy or for surgical interference, whereas only advanced ovarian carcinomas are available here either for million volt radiation or for radioactive gold therapy.

*Age incidence.*

It is evident from the histogram that malignant tumours were most commonly found after 45, although they may occur at any age (Fig. 1.).

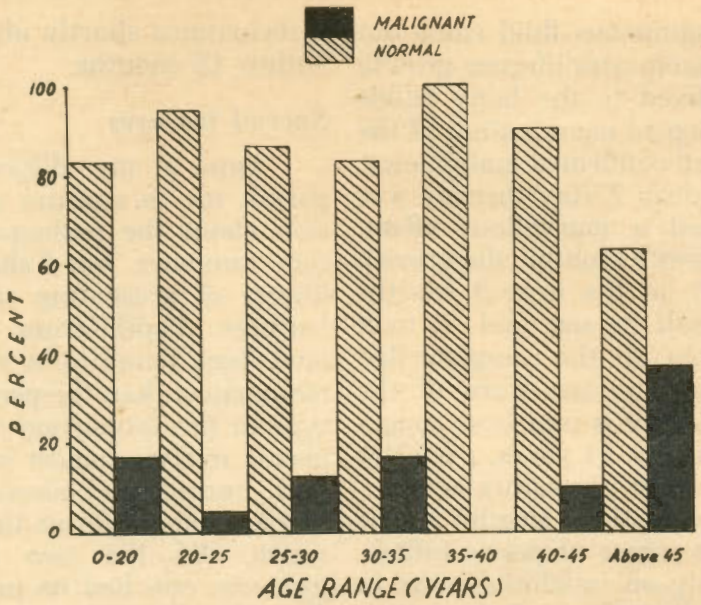


Fig. 1

We had 2 cases below the age of 20. One of these cases was a striking one. She was a nulliparous woman of 19 years, having a single serous cyst of the right ovary of the size of a foetal head. As it did not excite the least amount of suspicion, only cystectomy was done, preserving the rest of the ovarian tissue. In a year's time she was readmitted with a distended abdomen and extremely run down condition. Exploratory laparotomy revealed whole of the abdomen infiltrated with miliary metastatic growths having the primary in the same ovary. This, I must say, was certainly an atypical growth. As nearly 40 per cent of all ovarian tumours have been found malignant beyond the age of 45, the surgical interference at this age group should be radical.

*Symptomatology*

Malignant ovarian tumours are notoriously silent to start with, and much more insiduous than cancer of the cervix. When the lump is noticeable or felt in the abdomen, the disease is fairly advanced. This insidous and at the same time rapid growth predicts a bad prognosis.

Quite a good number of atypical cases exist too. I would cite two instances which are interesting from different points of view. Both these patients are from rich noble families well known all over India. The first case Lady X, about 45 years old, had a lump in the lower abdomen, softish in feel with limited mobility; running high temperature ranging between 101° and 103°F. Blood count showed high leucocytosis. Prontosil injections had practically no effect on temperature and antibiotics were not available in those days. On the assumption of an infected ovarian tumour, an exploratory laparotomy was done. On opening the abdomen

only serosanguineous fluid came out and an extensive papilliferous growth was found fixed to the bony pelvic wall. Histological examination of the piece removed confirmed malignancy. Subsequent deep X'Ray therapy was given and had a marvellous effect. During the first 3 months, the growth was arrested, in the next 3 months reduced to half its size and it took full 18 months for the complete disappearance of the last trace of the growth. The lady is free from recurrence for the last 14 years, perfectly healthy and most pleasantly active.

The other patient, Begum X was diagnosed as a case of pelvic inflammation having an indefinite mass in the pelvis with bulging of the pouch of Douglas. Posterior colpotomy revealed a disorganised mass which on histological examination was found to be a malignant papilliferous growth from the ovary. Deep X'Ray therapy was given. The whole mass practically disappeared within 6 months but unfortunately there was a recurrence shortly after. She died within 18 months.

*Special features*

Time at my disposal will not permit me to venture into a discussion about the pathogenesis of ovarian tumours but I shall take the liberty of presenting certain special features. Papilliferous ovarian cysts have been found to be more prone to malignancy than the pseudomucinous type in the proportion of 2 : 1. Anaplastic ovarian cancer of the type of solid, encephaloid, alveolar or medullary carcinoma forms the bulk of the series. Of the two Kruckenberg tumours, one had its primary in the stomach. There was one case of bilateral ovarian cancer associated with cancer of the body of the uterus. A very interesting case of bilateral ovarian epidermoid carcinoma, secondary to cancer of the cervix stage II, has recently been operated by me by the author's combined technique (Fig. 2). Histological sections from

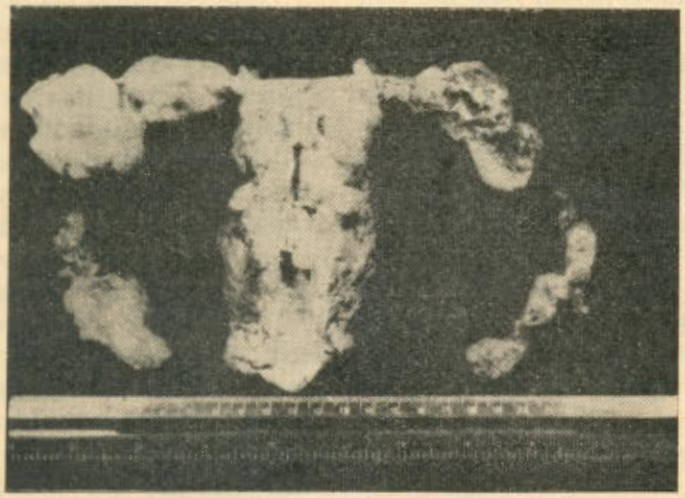

**Fig. 2. Bilateral ovarian epidermoid carcinoma secondary to cancer of cervix.**

both ovarian tumours show identical structure as that of cancer of the cervix. Metastases have also been found in the fallopian tube as well as in the pelvic node.

*Special ovarian tumours* are supposed to have low malignancy. I had two granulosa-cell tumours. Both patients were under teen age, of which one, a married girl, was admitted with acute pain in the abdomen and pregnancy of 16 weeks' duration. The other case, an unmarried girl, had a lump in the lower abdomen with varying periods of menorrhagia and amenorrhoea. Tumours were removed in both cases about 16 years ago. Since then, each one has had several children. There has been no recurrence or secondary metastasis.

I had recently a case of dysgerminoma referred by Dr. C. Ghose who operated on her. It was a very peculiar case. There was a solid tumour of the size of a foetal head from the left appendage of the rudimentary uterus. Histological sections revealed dysgerminoma in the tumour but something like a testicular structure in the other appendage. She developed secondaries in the left lumbar region, which responded well to deep X'Ray therapy. Later, she developed secondaries in the left supraclavicular region, the size of a duck's egg, but responded well to deep X'Rays again. Evidently dysgerminoma is radio-sensitive. It is about a year and half since she was first operated. Deep X'Ray therapy to the supraclavicular secondaries has been finished only recently. It is not possible for me to predict the future development in this case.

My experience about Brenner's tumour is limited to one case which was found in association with cancer of the cervix. This tumour was discovered while the combined radical vaginal hysterectomy et extraperitoneal pelvic lymphadenectomy (by author's technique) was done. She was operated about 2 years ago and is doing well.

*Treatment*

Whenever possible, surgical removal is the treatment of choice; but unfortunately, radical surgery is not possible in quite a good percentage of cases where the growth is fixed at the base or to the lateral pelvic wall. Under the circumstances, any attempt at radical surgery might prove fatal. A thorough clinical examination and an exploratory laparotomy will determine the extent of the growth and radical surgery or radiation therapy will have to be decided accordingly. As already mentioned, I have had very good as well as indifferent results by deep X'Ray therapy. An efficient follow-up system was well nigh impossible in our earlier days although we are much better off today through the organisation set up by the Cancer Hospital. I could trace only 3 of my earlier group of advanced ovarian carcinoma treated with deep X'Ray therapy who are well and active over a period of 10 years.

Results of the treatment are on the whole very unsatisfactory. Out of 68 cases in the Chittaranjan Cancer Hospital, 33 cases could be taken up for treatment. The rest could not be taken up either because they were too advanced or they refused any treatment. Surgical interference with

or without removal of the uterus was done in 15 cases. Nine cases were treated with deep X'Ray or million volt therapy while radio-active gold ($Au^{198}$) was administered in 9 cases. Twenty out of 33 cases of the Chittaranjan Cancer Hospital series are already dead; the rest are alive. Four cases have already passed 4 year period.

Radio-active gold has been recently introduced in the treatment of advanced ovarian cancers with ascites. This treatment is only palliative in the sense that the fluid in the abdomen may be dried up or reduced in quantity and a general sense of well being is experienced by the patients during the remaining period of their existence which might be extended to some months. Our results are not very encouraging. Of the 9 cases treated with radio-active gold, 4 died within a fortnight, 2 within a month, 1 within two months and one survived 5 months 4 days with good amelioration of complications. My last case has been treated five months ago. She is alive, the ascitic fluid has been greatly diminished and there is a general sense of well being. Radio-active gold in the form of colloidal suspension with pectin solution is introduced intraperitoneally and supposed to make gold plating of the peritoneal coverings inside the abdomen. I am more than conscious that "all that glitters is not gold" but I have a feeling that if radio-active gold be combined with million volt therapy in comparatively less extensive cases and not at the terminal stage of the disease, we might get some satisfactory results.