GENITAL TRACT SARCOMA - A CLINICAL STUDY OF 12 CASES

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SUMMARY

Over a period of 42 months, 696 cases of female genital tract malignancies were diagnosed at Dr. B. Borooah Cancer Institute, Guwahati. Genital tract sarcoma constitute 1.72% (12 cases) of gynaecological malignancies. Uterine sarcoma accounts for 58.33% of all cases. Four cases each were in the stages I and III and 2 each were in stages II and IV. Median age was 47 years and majority presented with a history of lump in abdomen and postmenopausal bleeding per vagina. Two patients are alive disease free at 13 and 20 months follow-up. One patient achieved local control of disease with radiotherapy but developed distant metastases later. Two cases were lost to follow-up and two cases developed progressive disease. In four cases with only biopsy for advanced disease chemo-radiation proved to be ineffective.

INTRODUCTION

The abundant connective tissue of the female genital tract is rarely the site of sarcomatous tumour formation. Sarcoma of the vulva, vagina, uterus and ovaries account for only upto 1% of the malignant neoplasms, primary in these organs. Kempson and Bari (1970) provide a good working classification of uterine sarcoma. The most common of these are the leiomyosarcoma 40%, the endometrial stromal sarcoma 15% and mixed mesodermal tumours (all types) 30%. The others, though encountered from time to time, are quite rare.

Until recently, the only available treatment for uterine sarcomas was surgical excision, which is effective only in neoplasms confined to the uterus. Advances in chemotherapy and radiation therapy

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have made these modalities worthy of therapeutic trial, either singly or in combination. Currently, there is a trend to follow surgery with chemotherapy because of the propensity of these tumours to metastasize widely, usually through the blood.

MATERIALS AND METHODS

This study was carried out at Dr. B. Borooah Cancer Institute Guwahati, Assam, over a period of 42 months from October '88-July '92. Out of 696 cases of newly registered female genital tract malignancies, only 12 of sarcomas were detected. Nine cases received primary surgical treatment outside, and subsequently referred to our institution for further management. Three cases were diagnosed in our institution. In most of the cases histopathological diagnosis were reviewed by two consulting Oncopathologists. Necessary investigations including blood, urine, ultrasonography, X-rays, CT Scan were done to know the extent of the disease. Chemotherapy and radiotherapy singly or in combination was given as adjuvant treatment. The following chemotherapeutic schedules were followed :

Schedule A. Cyclophosphamide 600 mg/m^2 + Dimethyl-triazeno-imidazole-carboximide (DTIC) 375 mg/m^2 + Adriamycin 40 mg/m^2 + Vincristine 1.4 mg/m^2. The cycle repeated at 4 weekly interval. **Schedule B.** Adriamycin 40 mg/m^2 + Cyclophosphamide 600 mg/m^2. The cycle repeated at 4 weekly interval.

The patients who received radiotherapy were treated with telecobalt using parallel opposing fields to the entire pelvis upto a dose of 50-55 gys. over a period of 5-5½ weeks.

RESULTS AND OBSERVATION

Over a period of 42 months 696 cases of genital tract malignancies were diagnosed. The distribution of these tumours is shown in the Table I.

In this series of 696 cases of gynaecological malignancies genital tract sarcoma constitutes 1.7% (12 cases), the distribution of which is shown in Table II.

The youngest patient was 22 years old and the eldest 65 years with median age

Table I

Genital tract malignancies

Site	No. of Cases (N)	Percentage
Cervix	567	81.46
Ovary	90	12.93
Uterus	17	2.44
Vulva	11	1.58
Vagina	8	1.14
GTD	2	0.28
Fallopian Tube	1	0.14

Table II

Sites of genital tract sarcoma

Site	No. of Cases (N)	Percentage
Myometrium	7	58.33
Cervix	2	16.66
Endometrium	1	8.33
Vagina	1	8.33
Ovary	1	8.33

of 47 years. Barring one case all others were married and 10 were multiparous. The pathological types are shown in Table III.

Eight cases were diagnosed after laparotomy, 3 after cervical and vaginal biopsy and one after uterine polypectomy. Four cases each were in Stages I and III 2 each were in stages II and IV.

Majority of the cases presented with the history of lump in abdomen and post-menopausal bleeding per vagina. Other complaints were menorrhagia, metrorrhagia, something coming down per vagina and urinary incontinence.

Six patients underwent some form of hysterectomy as initial surgical procedure while biopsy alone was possible in 4 cases. Myomectomy and ovariotomy was done in the remaining 2 cases.

One case of sarcoma confined to uterus only is being followed up after primary surgery and is doing well at 20 months. Out of other cases of hysterectomy alone group of uterine sarcoma, one patient was lost to follow-up and the remaining 2 cases developed progressive disease including massive pelvic disease. One patient after hysterectomy received postoperative radiation and developed distant metastases at 10 months while remaining disease free locally. The patient who received adjuvant chemotherapy was disease free at 6 months when she was last seen.

One patient who had myomectomy but subsequently recurred locally was treated with chemotherapy followed by hysterectomy. The patient is alive and disease free at 13 months. The cases of ovarian sarcoma diagnosed after ovariotomy received adjuvant chemotherapy and just completed 3 cycles was free from disease at her last check-up.

All the four cases who had biopsy only were in very advanced stage of disease and palliative chemo-radiation proved to be ineffective.

Table III

Histopathological types

Types	No. of Cases (N)
Leiomyosarcoma of uterus	6
Carcinosarcoma Uterus	1
Spindle cell sarcoma cervix	1
Rabdomyosarcoma cervix	1
Rhabdomyosarcoma vagina	1
Endometrial stromal sarcoma	1
Leiomyosarcoma ovary	1

DISCUSSION

Genital tract sarcoma account for only one percent of the primary malignant neoplasms in these organs. In this present study, genital tract sarcoma constitutes 1.72% of gynecological malignancies. Leiomyosarcoma are seen predominantly in the 5th or 6th decade of life. In our series except one case all others were seen in the 5th and 6th decade of life. Out of 7 cases of sarcoma of uterus, 2 were nulliparous.

Aaro et al (1966) noted that 6.5% of patients with leiomyosarcoma and 26% of patients with endometrial sarcoma had a related history of radium or roentgen induced menopause for benign uterine disease. However, not a single case of genital tract sarcoma in this present series had a history of prior radiotherapy. The presence of carcinoembroynic

antigen (CEA), has been demonstrated by Disaia et al (1975) to be present in 2 of 5 patients with uterine sarcoma; by Parente et al (1978) in 1 patient with uterine leiomyosarcoma; and by Rote et al (1980) in 1 of 4 patients with uterine sarcoma. CEA evaluation was not done in any one of the cases of sarcoma in this present series.

Kempson and Bari (1970) reported the incidence of leiomyosarcoma and endometrial stromal sarcoma as 40% and 15% respectively. In the present study, leiomyosarcoma constitute 58.33% and endometrial stromal sarcoma 8.33% only. Salazar et al (1980) strongly recommended post operative external radiotherapy to the pelvis and brachytherapy to the vaginal vault for uterine sarcoma. However Gilbert et al (1975) reported little benefit from adjuvant radiotherapy. In one case of leiomyosarcoma of uterus treated postoperatively with external pelvic radiotherapy in the present series local control of disease was in 2 achieved but the patient developed distant metastases in lungs and liver, 10 months after complete clinical remission.

Smith and Rutledge (1975) reported patients treated with radiotherapy to the pelvis plus vincristine, Actinomycin and Cyclophosphamide therapy. Seven of 8 patients were alive without evidence of disease 10 to 40 months post treatment. Azizi et al (1979) reported that 4 of 6 patients responded for an average of 15.6 months to a combination of Vincristine, Adriamycin, and Dimethyl-triazeno-imidazole-carboximide (DTIC).

In a small series of six patients, Seltzer et al (1984) noted three complete responders using doxorubicin (50 mg/m^2) and cis-platinum (50 mg/m^2). However, Omura et al (1983) in a Gynaecologic Oncology group study using adjunctive doxorubicin observed disappointing results.

In leiomyosarcoma of uterus recurrence occurs in more than 50% of the cases, even if the disease is apparently localised to the uterus. In more than 50% of the recurrences the disease will be outside the pelvis.

Endometrial stromal sarcoma is a rapidly growing, early invading tumour, Yoonessi and Hart (1977) reported that of the 7 patients treated by surgery alone all succumbed. Barlow et al (1973) produced a partial tumour response in 3 patients treated with Adriamycin. The lone case in our series was treated with Vincristine plus Adriamycin, Cyclophosphamide and DTIC, was lost to follow up after achieving compiete response (CR) for 6 months.

Abell and Ramirez (1973) reported 26 cases of primary sarcomas and carcinosarcomas of uterine cervix. Eight had leiomyosarcomas treated primarily by surgery. Two survived. Six had carcinosarcomas treated mainly by surgery, all succumbing to their disease. Two cases of sarcoma of cervix in the present series did not take any form of treatment. Pure sarcoma (heterologous) has extremely grave prognosis. We encountered 2 such cases of rhaldo sarcoma one each in cervix and vagina in advanced stage. Leiomyosarcoma of ovary is an extremely rare entity and literature is almost nonexistent. We encountered one such case which was

treated with Vincristine, Cyclophosphamide, Adriamycin and DTIC post-operatively. She has just completed 3 cycles.

CONCLUSION

Treatment results of genital tract sarcoma depends upon the initial stage and histological types. Primary surgical excision of the tumour still remains the cornerstone of treatment. Supplementary chemotherapy and radiation therapy singly or in combination still remains to be a modality worthy of clinical therapeutic trial.

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