DYSGERMINOMA : A REVIEW OF 12 CASES

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SUMMARY

Ten patients with the pure dysgerminoma of the ovary were treated at the Gujarat Cancer & Research Institute between 1975 and 1990. Six had stage IA disease, one had stage IC while 3 cases were advanced with III C state. Two were referred with recurrent disease.

All state I patients (6IA + IIC) are free of disease from 24 -> 168 months except one who developed recurrence after 168 months. Amongst stage III C cases, 2 are disease free while 1 died of Hepatitis B infection. Of the 2 recurrent cases, one has been salvaged while the other has succumbed to disease.

INTRODUCTION

Dysgerminoma accounts for 0.7% to 3.7% of ovarian tumours. (Fox & Langley FA 1976) Although they are rare, they are the commonest malignant germ cell neoplasms of the adolescent female. As they affect young women and are generally unilateral, preservation of fertility without compromising the cure becomes the main aim of management. The exact criteria for conservative management to maintain reproductive function have not been laid down in the literature. Hence, the tumour attracts considerable attention. Even the management of advanced disease which was traditionally treated by radiotherapy is being challenged after the advent of effective chemotherapeutic agents.

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MATERIALS AND METHODS

The files of the patients of dysgerminoma from 1975-1990 were reviewed. Eighteen cases were found. Only 12 were found

to be evaluable. These 12 cases had complete medical records, their histology was reviewed at out institute and was found to be pure dysgerminoma. These evaluable cases had complete follow up information.

RESULTS

The age of the patients ranged from 8 to 35 years, with a median age of 20 and mean of 22.

At the time of presentation, 80% of our patients were nulliparous. The onset of symptoms was insidious in all. Eight women (66%) complained of abdominal pain while 6 women (50%) presented with palpable mass and 2 (17%) noticed distension of abdomen.

Six patients underwent surgery before referral, 5 of whom had stage IA disease and in one case the tumour was ruptured at the time of removal (state IC). None of these patients consented to a restaging surgery at our institute. We have followed them meticulously with a regular clinical and ultrasonographic examination as well as the tumour marker study of B-hcg and AFP.

One stage IA and 3 state IIIC cases underwent primary surgery at our institute. In general, staging laparotomy at our institution consists of saline washings for cytology of pelvic, paracolic and subdiaphragmatic peritoneal surface biopsy of suspicious site, unilateral salpingo-oophorectomy and contralateral ovary is bivalved. The omentum is assessed by infracolic omentectomy. Metastases in the retroperitoneal nodes are diagnosed by biopsy of suspicious nodes identified on palpation.

In 2 stage III C cases both ovaries were involved and therefore besides staging laparotomy and hysterectomy with bilateral salpingo-oophorectomy was done. In one case of stage IIIC, the bilateral ovarian tumours had formed a conglomerated mass with the enlarged retroperitoneal nodes, so only the biopsy of both the ovaries was taken. In this case, B-hcg and AFP were not detectable. Two cases were referred with recurrent disease after primary surgery.

The tumour arose from the right ovary in 4 patients, left in 3 while bilateral in 3 cases. The size ranged from 10 to 25 cms. In case of premenarchal girls, pretreatment karyotyping is necessary as dysgerminoma has a propensity to occur in dysgenetic gonads. After the facility has been made available at our institute, it has been done in one case and was normal.

The treatment of pure dysgerminoma changed with the better understanding of disease process, identification of tumour markers and advent of effective chemotherapy. Out of 7 cases of Stage I (6 IA + 1 IC), only 2 cases are truly conservatively managed without any adjuvant therapy. One of whom is pregnant at present. Four cases were given adjuvant radiotherapy. It consisted of whole abdominal radiotherapy via an open field technique, with additional pelvic teletherapy. In 2 of these cases, pelvic teletherapy was restricted to hemipelvis. Both these women had 2 normal children.

One case was referred first to the medical oncologist and he gave her 6 cycles of chemotherapy containing Etoposide and Cisplatin. She is regularly menstruating and disease free after 30 months.

The stage III C operable cases have been given adjuvant radiotherapy to whole abdomen with pelvic boost and have

completed 12 cycles of VAC (Vincristine, Actinomycin-D, Cyclophosphomide), one is free of disease at present while the other died of Hepatitis-B. The inoperable case has taken radiotherapy followed by chemotherapy VAC.

One patient with recurrent disease was operated 13 months ago and she came with left supraclavicular nodal enlargement. Her node biopsy was positive. she was given radiotherapy to whole abdomen with pelvic boost followed by 6 cycles of VBP (Vinblastin, Bleocin and Cisplatin). She has survived disease free for 73 months. The second patient had both pelvic and lung metastases. She developed recurrence after 9 years following primary surgery. She refused radiotherapy and took chemotherapy (VAC) irregularly and succumbed to disease.

DISCUSSION

Majority of the patients of dysgerminoma fall in second and third decades of life. As these patients are within the reproductive age group, treatment decision must consider not only survival but also reproductive potential. Early reports of stage I disease indicated a rather poor prognosis, with five-year survival of 27-33%. These results were in prestaging and prechemotherapy era. Recent well-stated series show 90-100% five year survival in state I A whether or not adjunctive radiotherapy was administered. Now with the better understanding of disease process and when staging laparotomy is performed, in a young, nulliparous woman, with stage IA tumour can be treated conservatively provided she agrees to careful follow up.

Some authors have related tumour size to prognosis. Krepart et al (1976) noted that tumour size of more than 10 cms. recur. Gordon et al (1981) find no statistical difference in survival based on tumour size. In the study by La Polla et al (1987) they also found that the tumour size does not influence the prognosis. In the present study, all 7 stage I tumours were more than 10 cms. but five were given adjuvant treatment (4 radiotherapy + 1 chemotherapy). All are disease free except one who developed recurrence after 14 years of disease free interval.

Asadourian and Taylor (1969) reported that anaplastic dysgerminoma have a worse prognosis. However, Asadourian's series did not stratify prognosis for anaplastic tumours by stage. In La Polla et al (1987) series, capsular penetration was highly correlated with advanced disease.

At present, in surgical stage I A encapsulated dysgerminoma, no adverse histopathologic feature has been identified to suggest the need for adjuvant therapy.

In past advanced dysgerminomas were treated by primary radiotherapy. De Palo et al (1982) suggest that the prognosis of patients with both retroperitoneal and intraperitoneal disease treated by radiotherapy alone is poor and hence chemotherapy should be combined with radiotherapy.

In our study, only 3 cases of stage III C were found to be evaluable. Although I patient has succumbed to Hepatitis B infection, 2 cases are free of disease after a mean follow up of 22 months. Both were given adjuvant radiotherapy followed by chemotherapy (VAC). Although Cisplatin containing combination chemotherapy is more effective, it could not be given due to monetary limitation.

Treatment of Dysgerinoma, at The Gujarat Cancer & Research Institute

Stage	No. of Patients	Type of surgery (No. of patients)	Radiotherapy (No. of patients)	Chemotherapy	Outcome (No. of pts.) Follow up in months
IA	6	USO (5)	None (3)	1 (Cisplatin + Etoposide	Alive, NED (5)
		TAH BSO (1)	H.P. + WH (2) P + WH (2)		24 - 168
					Rec. (1) After 168
IC	1	USO (1)	P + WH (1) 144	None	Alive, NED (1)
IIIC	3	TAH + BSO (2) + I. Omentectomy Bx from Bilateral (1) Ovarian masses	P + WH (3)	VAC (3)	Alive, NED (2) 18 - 26 Died (1) of Hepatitis B

KEY : USO : unilateral salpingo - oophorectomy; TAH = Total abdominal hysterectomy; BSO = Bilateral salpingo - oophorectomy; I = Infracolic; Bx = Biopsy, H.P. = Hemi Pelvis; P = Pelvis; wh = Whole abdominal; VAC = Vincristine, Actinomycin - D, Cyclophosphomide; NED = No evidence of disease, Rec = Recurrence.

One of the current challenges of lysgerminoma is preservation of fertility n advanced disease provided the contralat-ral ovary and the uterus are normal. These atients are treated with chemotherapy. Chemotherapy alone is capable of curing early 70% of patients with advanced disease nd radiotherapy can potentially salvage he remainder.

Based on our experience and a review f literature, we can say that in Ia en-apsulated tumours conservative surgery s possible. With the advances in tumour narker assays and non-invasive radiology, hese patients can be meticulously followed p. Regarding advanced cases our ex-erience is limited.

We do not have any experience of conserving fertility in advanced cases. Even in future, conserving reproductive function in this group will remain debatable in our set up. These advanced patients, generally come from a low socio-economic strata and are not reliable for follow up.

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