Malignant Ovarian Germ Cell Tumours: AIIMS Experience

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BACKGROUND :

Malignant ovarian germ cell tumours (MOGCT) are rapidly growing tumours seen in adolescent girls and young women. Survival and prognosis has significantly improved with conservative surgery and cisplatin based therapy. We retrospectively reviewed the records of patients diagnosed to have MOGCT.

MATERIALS AND METHODS:

Between Jan 1998-Dec 2007, 114 patients with MOGCT were registered. 99 patients (87%) underwent upfront surgery and 15 (13%) received neoadjuvant chemotherapy. Median age was 19.5 years ranging from 6 to 44 years. 63 patients had FIGO stage I&II and 51 had stage III & IV at diagnosis. Pain in abdomen (68%), abdominal distension (35%), abdominal mass (30%) were common presenting symptoms. Dysgerminoma (n=42) was common histologic subtype followed by endodermal sinus tumour (n=29), mixed GCT(n=23), immature teratoma (n=19), pure choriocarcinoma(n=1) and embryonal carcinoma(n=1). Among nondysgerminoma subtypes, at baseline serum áFP (n=60) was elevated in 50% (median-530 ng/ml, range, 11-69760), serum âHCG (n=58) in 46.5% (median-66 mIU/ml, range,15 - 63900). In both dysgerminoma and nondysgerminoma subtypes, serum LDH (n=41) was elevated in in 75.6% (median 1406 IU/L, range=440-15730) and S. CA-125 (n=68) in 63.2% (median-112.5 U/ml, range=40-1410). 78% of patients underwent U/L salpingo-oopherecomy. 16.7% - panhysterectomy, 5.3% of patients had only biopsy.

RESULTS: 9 patients were kept under observation in view of dysgerminoma-stage IA (n=7) and immature teratoma-stage IA, grade1 (n=2). 50 patients (dysgerminoma-21, nondysgerminoma-29) received adjuvant chemotherapy using 3 cycles of BEP (bleomycin, etoposide and cisplatin) in view of nil residual disease. 27 patients (dysgerminoma=6, nondysgerminoma=21) received 4-6 cycles of BEP for gross residual disease. 23 patients with recurrent disease received salvage chemotherapy ;16 of them were chemonaive while 7 had received prior chemotherapy. Thus, overall 100/114 patients received chemotherapy, 9 were kept under observation, and 5 were lost to follow up. All 9 patients “under observation” continue to be alive and disease free (median FU=73months). In the adjuvant group, of 50 patients - 49 are alive and disease free, one patient relapsed with metastasis in gall bladder and died of progressive disease. The median follow up of this group is 59.5 months (range, 17-131 months). Among 27 patients with advanced disease- 23 achieved CR, 2 had progressive disease and in 2 status is unknown. 21/23 complete responders are alive and disease free, remaining 2 relapsed and died of progressive disease. Among patients with recurrent disease, 14 of 23 responded; CR=11, PR=3 and 7 had progressive disease & status was not known in 2. Currently 14/23 are alive and disease free. The probability of overall survival for all patients is 88% at 120 months, mean 118.12 months (SE ± 3.77), 95%CI (110.72, 125.51). Of 91 eligible

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patients, information on reproductive functions is available in 62 patients. 52 resumed menstruation, 5 attained menarche after treatment and 5 patients did not resume menstruation after treatment. Of married females, 10 delivered healthy babies. Outcome was superior for patients with 'Nil residual disease' (p=0.0002) and those with stage I & II (p=0.0039). Compared to other histology subtypes, endodermal sinus tumour histology was associated with inferior outcome (p<0.024).

Conclusion: Our study confirms excellent outcome for patients with malignant germ cell tumours of ovary following conservative surgery and BEP chemotherapy. Selected patients can be kept on observation after conservative surgery without adjuvant chemotherapy. Reproductive functions are retained in most eligible patients.