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ROLE OF SURGERY AFTER CHEMOTHERAPY IN THE TREATMENT OF ADVANCED TESTIS CANCER

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The role of surgery for advanced testis cancer has been studied in 45 cases who showed CR or PR to chemotherapy and 32 cases with stage 1 treated according to surveillance policy. (1) Out of 17 cases who received chemotherapy alone, 14 cases showed CR and 3 cases PR. 2 CR cases died of multiple lung and/or liver metastasis within (6) and 13 M, 3 PR cases refused surgery and died of multiple metastasis within 6 M. (2) 25 cases underwent surgery after chemotherapy. Surgical specimens showed that 8 cases had non-cancer tissues, 7 had mature teratoma, and 14 had cancer. In these groups, 3-year survival rates were 87%, 57%, and 43%, respectively. Multiple lung metastasis accounted for 67% of the causes of death, while recurrence at the site of operation as low as 25%. (3) In 4/32 cases with stage 1, the disease recurred in bone (1), the lungs (2) and the retroperitoneal lymph node (1).
Even in advanced testis cancer, 3 year survival rates were almost comparable in the CR cases confirmed by imaging diagnosis and in those confirmed by surgery. These findings have shown that surgery plays limited role in CR cases confirmed by imaging diagnosis.

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CLINICAL LONG-TERM TOXICITY AFTER INTENSIVE CYTOTOXIC TREATMENT FOR MALIGNANT GERM-CELL TUMORS (GCT).

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Clinical long-term toxicity was studied in 45 patients (pts.)treated for advanced GCT who survived for ≥ 5 years after cytotoxic treatment. Pts. were eligible if they had received an accumulated dose of ≥220 mg doxorubicin (dox).31 pts.initially received VACAM chemotherapy (CT)(Klepp et al Cancer 1977;40:638).10 of these pts.were treated later with cisplatin-based salvage CT. The remaining 14 pts. received cisplatin-based CT initially,. followed by dox maintenance treatment. Median accumulated doses were:dox 640 mg(range 240-1200); cyclophosphamide (cy)9750 mg (range 0-42400);cisplatin 470 mg (range 0-2020). Other drugs used: dactinomycin, vinblastin, bleomycin, and lomustin. 30 pts.also had radiotherapy (RT); 23pts.had abdominal surgery. Median follow-up was 147 months.
The most frequent late toxicities were cardiotoxicity (6 pts.),gastrointestinal (GI) side effects (11 pts.) and peripheral neuropathy (8 pts.). 5 of 6 pts. with cardiotoxicity had been irradiated to the cardiac region. Abdominal RT had been used in all 11 pts. with GI side effects. 7 of 8 pts. with neuropathy had been irradiated to the spinal cord. A secondary non-germ cell cancer was registered in 7 pts. after a median follow-up of 120 months RR 5.0;95% CI 2.0-10.3.(Expected 1.4 according to the risk in the Norwegian population). 5 of these 7 pts. had accumulated doses of cy >10000mg, and dox >975mg. 3 of these, and the remaining 2 pts. had abdominal RT. (40-50 Gy). Conclusion: A combination of dox, high-dose cy and RT leads to a high risk of late cardiac, GI and neurological toxicity and secondary cancer in pts. cured of malignant GCT. These pts. should have long term follow-up. The combination of RT and the above cytostatic drugs should be avoided.

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LONG TERM FOLLOW UP OF FERTILITY IN PATIENTS WITH TESTICULAR CANCER

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Fertility disturbances resulting from chemotherapy, radiation therapy and retroperitoneal surgery, have become a major concern for young patients with testicular cancer. Fertility and the time required for the recovery of spermatogenesis were investigated in 20 patients, age 18-44 years, (mean age 30.2) referred for cryopreservation of sperm before starting oncologic therapy.17 patients with sperm counts between $1x10^6$/cc - $86x10^6$ cc (mean 23.8 $x10^6$/cc) with motility range of 20-50% cryopreserved semen.
12 Patients had counts below $20x10^6$/cc. In 10 patients, the mean duration for recovery of sperm to pretreatment counts or above them, was 26.4 months after cessation of therapy with sperm concentration between 8 $x10^6$-188 $x10^6$ (mean 82.3 $x10^6$/cc). 6 remained azoospermic and 4 were lost to follow up. 2 patients reported spontaneous pregnancy, 22 months after chemotherapy. 2 pregnancies were achieved with fresh semen after swim up procedure and intrauterine insemination. 1 pregnancy with in vitro fertilization and 1 additional pregnancy from cryopreserved thawed sperm. 2 failed to conceive with the cryopreserved sperm.
Although semen quality is often poor before treatment, cryopreservation of semen should be considered, since in vitro fertilization or micromanipulation may be successful even with very poor semen quality.

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LONG OUTCOME RESIDUAL MASSES (RM) AFTER CHEMOTHERAPY (CHT) IN NON-SEMINOMATOUS TESTICULAR TUMOURS (NSTT): 13 YRS EXPERIENCE AT A SINGEL CENTRE. GERMA JR;Mercedes A;Rueda A;Mesia R;Fariñas J; Villavicenio H;Solé-Balcells I;León C; López López JJ. Medical Oncology Unit. Hospital Sant Pau. Barcelona (Spain).Between I/1980-XII/1992, 118 pts were treated with CHT due to disseminated NSTT. There were 74 pts with good prognosis (GP) and 44 with bad prognosis (BP). After first line CHT 45 GP pts and 10 BP pts achieved a clinical complete response and 57 pts (29 GP and 28 BP) presented a RM (p=0.001); 6 pts progressed. The RM dissapeared in 7 pts and 50 pts were operated on with the followed histological findings: 9(18%) cancer, 17(34%) mature teratoma (MT), 22(44%) necrosis-fibrosis (N/F) and others in 2.
The recurrences were: 5/9 in cancer pts (4 cancer, 1 MT); 6/17 in MT pts (all with growing teratoma (GT)); 0/22 in N/F pts. There were 3/4 deads in the cancer pts. The others 47 pts are alive and disease free (3 with GT). Ten years disease free actuarial survival is 94% for the RM pts and 89% for the whole group (118 pts).
CONCLUSIONS: Pts with MT and/or N/F have an excellent outcome, but GT pts need multiple resection to achieve stable CR. 66% of cancer pts are long survivors with surgery plus salvage CHT.

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OTOTOXICITY FOLLOWING THERAPY FOR TESTICULAR CANCER

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Ototoxicity represents a possible side-effect of chemotherapy for testicular cancer. 85 patients (pts) with testicular germ cell tumours treated between 1978 and 1990 who were in CR for more than 15 months were evaluated by audiometric examination (250-10.000 hz) and for subjective symptoms of long term ototoxicity.
Patients: median (med) age 28 (17-46) years, med. follow up 58 months (15-149). Treatment: PVB 27 pts, PEB 21 pts, PEVB 7 pts, PEVB+PEB 21 pts and high dose (HD)-PEB 9 pts (P = cisplatin; V = vinblastine; B = bleomycin; E = etoposide).
Results: 6 of 85 (7 %) pts reported typical subjective symptoms of ototoxicity. Significant audiographic changes (> 20 dBhl bilateral hearing threshold reduction) were found in 16/85 (19 %) pts. The med. cumulative dose of cisplatin for pts with audiographic changes was 700 mg/m^2 (7/9 patients receiving HD-PEB (200 mg/m^2 of cisplatin per cycle)) compared to 400 mg/m^2 for the total group. 15/16 pts with pathologic audiograms had subjective complaints. 50 % of pts with audiographic changes had a history of hearing problems prior to chemotherapy.
Conlusions: Approximately 25 % of pts treated with cisplatin-containing chemotherapy for testicular cancer will experience some degree of irreversible ototoxicity. All pts receiving a cumulative dose of > 650 mg/m^2 of cisplatin experienced irreversible ototoxicity. Pts with hearing problems prior to cisplatin chemotherapy had an increased risk for the development of late ototoxicity.

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TESTICULAR TUMORS (TT) IN THE ELDERLY. THE BEILINSON MEDICAL CENTER (BMC) EXPERIENCE.

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Among 118 cases of TT seen at BMC between 1970-1990, 11 elderly patients (pts) were identified.The mean age was 73y (range 65-86). Of them, 6 pts had non-Hodgkin's lymphoma with a diffuse large cell histology. Of special interest is the second group of 5 pts with non-seminomatous germ cell tumors (NSGCT), a very rare occurrence at this age. In 1 pt, spermato-cytic seminoma recurred 3 years after radiotherapy in the liver and retroperitoneal nodes with a serum AFP of 439 ng/l and histology of embryonal carcinoma (EC). The remaining 4 pts had: EC(2), EC and seminoma(1), EC + yolk sac tumor (1). All except the last had stage III or IV disease. The outcome was fatal in all, with a median survival of 13 months (range 6-36). One pt died of bleomycin toxicity (cumulative dose 180 units) and the others responded only partially (3) or progressed on bleomycin-etoposide-cisplatin (BEP) combination chemotherapy. NSGCT in the elderly occur very rarely, are usually diagnosed in an advanced stage, and are associated with a dismal prognosis.