AN INTERESTING CASE OF SECONDARY HYDROCELE

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Abstract: Testicular cancer is the most common solid malignancy in men ages 15 to 35 years of age. Cancers of the testis comprise a morphologically and clinically diverse group of neoplasms, most of which are germ cell tumors. Most of the testicular carcinomas present either as painless enlargement of testis or with features mimicking acute orchitis, secondary hydrocele is one of the presenting features. Herewith we present a case of mixed germ cell tumour of testis presenting as secondary hydrocele. 

Keyword: cancer testis, germ cell tumour, secondary hydrocele

Case Report:
25 year old gentleman came with complaints of swelling in the left side of scrotum for 3 months duration. Swelling was insidious in onset, gradually progressive in size. There were no aggravating or relieving factors and the swelling was not reducible. There was history of dragging pain in the left side of the scrotum since the past one month. He gave history of trauma 3 months back following which he noticed the swelling. There was no history of fever, loss of weight or appetite.

Patient had undergone inguinal hernia repair on the right side 10 years back. He is not a known case of hypertension/ diabetes/ tuberculosis/ asthma/ epilepsy. On examination there was a swelling in the left side of scrotum which was of size 10 X 6 cm, smooth surface, skin over the left hemiscrotum was stretched and rugae were absent. There were no sinuses/ dilated veins/ scars. On palpation it was not tender, not warm, and soft in consistency, it was able to get above the swelling and it was not able to palpate the testis separately not reducible/compressible, fluctuation positive, transillumination was negative. Left side cord structures, penis and right testis, left inguinal region were normal. Right inguinal region showed a hernia repair scar.

Intraoperatively the hydrocele sac showed a collection of about 50 ml of hemorrhagic fluid with the enlarged left testis of size 7 x 4 cm. Hence left orchidectomy was done and the specimen was sent for Histopathological examination.

Per operative findings:

Left Orchidectomy Specimen

Cut section of the specimen
Histopathological Examination:
Mixed germ cell tumour (yolk sac tumour with embryonal carcinoma)
Post operatively patient was further investigated which revealed the following findings: Serum LDH: 293 U/L (Normal: 135 – 225 U/L) Serum AFP: 2737.08 IU/ml (Normal: 0.5 – 5.5 IU/ml) CT chest: No abnormalities detected CECT Abdomen: Retrocaval, Para-aortic lymphadenopathy, largest of size 1.5 x 1cm.

CECT Abdomen
Patient was advised a retroperitoneal lymph node dissection, however the patient refused surgery. Hence medical oncologist and radiotherapist opinion was sought. He was started on BEP (Bleomycin -Etoposide-Cisplatin) chemotherapy regimen and radiotherapist suggested follow up for opinion after the completion of chemotherapy.

FOLLOW UP
Adequate health education regarding the testicular malignancy, its prognosis and appropriate counseling was given to the patient. He is now on a regular follow up for further cycles of chemotherapy.

Review of literature:
Testicular cancer is the most common solid malignancy in men ages 15 to 35 years of age and evokes widespread interest for several reasons. Testicular cancer has become one of the most curable solid neoplasms and serves as a paradigm for the multimodal treatment of malignancies. The dramatic improvement in survival resulting from the combination of effective diagnostic techniques, improved tumor markers, effective multidrug chemotherapeutic regimens, and modifications of surgical technique has led to a decrease in patient mortality from more than 50% before 1970 to less than 5% in 1997. Germ cell tumors (GCTs) account for 95% of testicular cancers. They may consist of one predominant histologic pattern, or represent a mix of multiple histologic types. For treatment purposes, two broad categories of testis tumors are recognized: pure seminoma (no nonseminomatous elements present), and all others, which together are termed nonseminomatous germ cell tumors. Nonseminomatous germ cell tumors consist of embryonal carcinoma, teratoma, choriocarcinoma, yolk sac tumour and a combination of any of the above tumours which is called as mixed germ cell tumour. Cryptorchidism and Klinefelters syndrome are two important predisposing conditions for testicular malignancies. Painless testicular mass with loss of testicular sensation is the pathognomonic sign of testicular malignancy, but is seen only a minority of patients. Majority of patients present with features of epididymoorchitis and a minority of them present with secondary hydrocele. About 30% to 40% of patients complain of a dull ache or heavy sensation in the lower abdomen, perianal area, or scrotum, whereas acute pain is the presenting symptom in 10%. Gynecomastia, which occurs in about 5% of men with testicular GCTs, is a systemic endocrine manifestation of these neoplasms.

Diagnosis can be made by clinical examination along with imaging methods, serum tumour markers. Scrotal ultrasound can distinguish intrinsic from extrinsic testicular lesions with a high degree of accuracy and can detect intratesticular lesions as small as 1 to 2 mm in diameter. Further radiologic workup includes a high-resolution CT scan of the abdomen and pelvis and a chest x-ray. Regional metastases first appear in the retroperitoneal lymph nodes.

Serum levels of AFP or -HCG are elevated in 80% to 85% of men with nonseminomatous GCTs, even when nonmetastatic. In contrast, serum -HCG is elevated in fewer than 20% of testicular seminomas, and AFP is not elevated in pure seminomas. Serum LDH concentrations are elevated in 30% to 80% of men with pure seminoma and in 60% of those with nonseminomatous tumors. Percutaneous biopsy of testicular masses is contraindicated due to the risk of seeding the scrotal wall and changing the natural retroperitoneal lymphatic drainage of the testicle.

Treatment mainly consists of radical high inguinal orchidectomy. Further management depends on the staging of the disease. Patient may be subjected for Retroperitoneal lymph node dissection (RPLND) followed by chemoradiotherapy. Presently chemoradiation without RPLND has been practiced more frequently. Chemotherapy consists of BEP regimen (Bleomycin, Etoposide, Cisplatin). Followup is done by using clinical examination, tumour markers and imaging.

Cisplatin-based chemotherapy regimens have improved the response rates for testis cancer. In addition, detailed identification of the retroperitoneal lymph nodes and metastatic landing sites has been a major advance in surgical treatment of patients at high risk for advanced cancers.

Conclusion:
More than 50 % of germ cell tumours include more than two basic germ cell types. Testicular tumour should be suspected in all patients presenting with recent onset of testicular swelling or a hydrocele and should be subjected to ultrasound of scrotum. About 90% of patients of non seminomatous germ cell tumours can achieve complete cure with aggressive chemotherapy. Although prognosis depends on the clinical stage of the disease, histological type and compliance of the patient to treatment also plays a major role.

References:

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