

Open Access

Editorial

A Case Report: Testicular Tumor

Hashemi Mehdi¹ and Bayani Mahtab^{2*}

¹Department of Hematology and Oncology, Zahedan, Iran ²Department of Internal Diseases, Neyshabur, Iran

Case Report

A 15 years old boy was admitted to educational center hospital in southeast of Iran named Zahedan, because of dyspnea, pleuretic chest pain, on productive cough, low grade fever, weight loss about 2 kg during 3 months, malaise, and a big testis. Also he complained from mild low back pain. His complaints had begun since 3 month before admission. Dyspnea was exacerbated in the left lateral decubitus position. The temperature was 37.8°C, the pulse 135 beats per minute, the respiratory rate 32 beats per minute and the blood pressure 120/80mm Hg. The oxygen saturation was 85% when the patient was breathing ambient air. Physical examination presented on anxious patient with mild temporal fasting. In lung examination, in basal of the left lung we couldn't hear normal sounds. In the heart we heard at the left sternal border and apex a grade 3 systolic murmur. His right scrotom was big (about 1 x 0.5 cm) with a round and firm testis. The remainder examination was normal.

Laboratory Test

Complete blood count showed a hematocrit of 27.9%, a white-cell count of 1170 per cubic millimeter, and a platelet count of 45,000 per cubic millimeter. Levels of serum electrolytes were normal, the urea nitrogen level was 20 mg per deciliter (10.7 mmol per liter), the creatinine level 0.4 mg per deciliter (185.6 μ mol per liter). PT (protrombin time) was 16.5 and 1 APTT (activated partial thromboplastin time) was 53, lactate dehydrogenase (LDH) was 1444, alpha 1-fetoprotein level was 222.6 ngm/ml and beta-human chorionic gonadotropin (B-HCG) level was 56 ng/ml.

The results of another laboratory tests are shown in Table 1.

A radiograph of the chest (Figure 1) showed multiple nodules with round border in the parenchymal of both lungs. Some of them were near the mediastinum; in the basal of both lungs we could see collapseconsolidation. Diaphragms were asymmetric. CT scan of the chest (Figure 2) showed multiple nodules with different sizes, the probability of metastasis became propounded.

Abdominal CT (Figure 3) scan showed following points:

1. A huge mass in posterior aspect of liver in which its diameter was estimated as 100 x 132 mm and its extension from abdomen to thorax.

14/20	44700	DU IN I			<u> </u>
WBC	11700	BON	20	Bill(T)	0.4
HGB	9.9	Cr	0.4	LDH	1444
MCV	77.4	Na	138	Alfa-fetoprotein	222.6
MCH	24.9	K	4.3	B-HCG	56
MCHC	32.2	Са	8.3		
RDW	15.9	Bs	69		
PLT	45000	Uric acid	4.4		
PT	16.5	AST	31		
PTT	53	ALT	21		
ESR	32	AP	29		
PT PTT ESR	16.5 53 32	AST ALT AP	31 21 29		

Table 1: Laboratory tests

- 2. Multiple paraaortic lymph nodes that the biggest one was 45 x 57mm.
- 3. A lymph node in inguinal area with 21 x 86 mm in diameter.
- 4. Small collection of fluid associated with peritoneal seeding.
- 5. Thrombosis in IVC.
- 6. Other parts of abdominal and pelvises were normal.
- Doppler ultrasound induced presence of thrombosis in IVC.

Heart consultation was requested based on unexplained dyspnea and respiratory distress and suspicion to endocarditis according to presence of fever, cardiac mass and systolic murmur and following points were reported: (Figure 4) A large non homogenous hyper mobile mass was detected that originate from IVC and protrude in to RA (Right atrial)and RV(Right ventricle).



Figure 1: A radiographic of the chest.



Figure 2: CT scan of the chest.

*Corresponding author: Bayani Mahtab, Department of Internal Diseases, Neyshabur, Iran, E-mail: mahtabbayani@yahoo.com

Received March 30, 2012; Accepted April 12, 2012; Published April 18, 2012

Citation: Mehdi H, Mahtab B (2012) A Case Report: Testicular Tumor. J Clinic Case Reports 2:e115. doi:10.4172/2165-7920.1000e115

Copyright: © 2012 Mehdi H, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.



Figure 3: Abdominal CT scan



Figure 4: Doppler ultrasound induced presence of thrombosis in IVC.



Figure 5: Result of surgery of a long tumor.



Combination of frequent prolonged PT and thrombocytopenia has persuaded us that it's explanation is DIC associated with cancer induced anemia, so replacement therapy was applied by FFP and Plt transfusion frequently. But thrombocytopenia didn't correct it in spite of further than 20 units Plt.

Clinical Diagnosis

Laboratory data showed elevation of AFP, B-HCG and LDH, testicular mass in ultrasography, Computed Tomography (CT) scan revealed a huge retropritoneal tumor with multiple nodules in the lung was suspected the testicular tumor with metastasis.

Management

His therapeutic decision was planned by BEP (Bleomycin, Etoposide and Cisplatin) as classic 5 days protocol and following resection of cardiac and IVC mass.

Result of surgery made us surprised due to extraction of a long tumor. Its length was about 30 cm. its origin was from IVC and extended to RV and terminated to LAP (Figure 5).

Pathological Findings

The pathological findings showed: (Figure 6)

Macroscopy

Received specimen in formalin, consists of elongated irregular whitish creamy rubbery tissue 30cm in length and 1 to 5 cm in diameter.

Microscopy

Sections show tumoral tissue which is composed of cellular primitive mesenchymal cells, immature cartilaginous tissue, primitive neuroepithelial structures and few glandular structures lined by one layer of cuboidal cells. There are also deposition of fibrinoid material and focally mixoid degeneration. Malignant transformation is not seen in this specimen.

Diagnosis

Right atrium mass, excisional biopsy compatible with immature teratoma.

Discussion

The incidence of testicular tumor in children and adolescents has been reported to be 0.5 to 2.0 per 100000 [1]. Testicular tumor is about 1% of all malignant tumors [2]. The average age of testicular tumors in childhood is 2 to 4 years old and in adolescence is from 20 to 35 years of age [3]. The highest incidence of testicular tumors is in Norway, Germany and Switzerland. In 2007 the incidence of testicular tumor in Iran was up to 25 cases [4] (Table 2).

There are some risk factors for testicular cancer that including: The contra lateral testis, undescended testis (cryptorchidism), prenatal exposure to high estradiol levels, gonadal dysgenesia, exposure to chemical carcinogens, orchitis and trauma. Other risk factors are childhood inguinal hernias, testicular atrophy [5], and carcinoma *insitu* [2]. In 50% of cases the natural history of CIS is progression to malignancy at 5 years [6]. The yolk sac carcinoma is the most frequent of testicular tumors in childhood, and in 75% of patients yolk sac

Morphology	n	%
Endodermal sinus tumor	12	48
Teratoma ,Malignant, NOS	3	12
Embryonal rhabdomyosarcoma	2	8
Mixed germ cell tumor	2	8
Tumor cell malignant	1	4
Seminoma	1	4
Malignant teratoma, Undifferentiated	1	4
Malignant lymphoma, Non-hodgkin, NOS	1	4
Malignant lymphoma, Lymphocytic, Intermediate	1	4
Malignant lymphoma, Large B-cell, Diffuse, NOS	1	4

 Table 2: The incidence of testicular cancer in Iran in 2007.

tumors are of gonadal origin [7]. Whereas in adolescence seminoma is common [8] and its incidence is about 40 % [2]. Germ cells tumors are about 90% to 95% of all testicular tumors [2]. During infancy, teratoma is common and its incidence is about 25-35%. It is includes epidermal cysts and yolk sac tumors [2]. Hansen [9] reported the occurrence of teratoma in the undescended testis in a 2-month-old boy in 1967 and stated that he could not find such an association in a search of American literature in the past 10 years. In 1970 young reported the occurrence of embryonal carcinoma in 2 patients of undescended testis [10]. The incidence of embryonl carcinoma is about 20-25% of primary neoplasms of testis [2]. For the first time in 1988, yolk sac tumor was reported by Cox [11].

Presentation

The classic presentation of testicular tumor is a swollen, painless and hard testis in a man in the third of fourth decade of his life. Depending on the amount of disease, clinical stage and the presence of metastases, the presentation can vary [5] such as: Dull ache or heaviness in lower abdomen, acute scrotal pain (10%), lower limb swelling (5%), neck mass, anorexia, vomiting, cough, back ache, gynecomastia (5%) and infertility (rarely). In the early stage, patients may have no symptoms at all and their cancer may be found incidentally during routine physical exams. Leydig cell tumors and Sertoli cell tumors are two types of testicular tumors that may produce androgens or estrogens. Estrogen can cause gynecomastia and decreased libido in men. Over production of androgen can cause growth of facial and body hair at an early age [12].

Diagnosis

The diagnosis of testicular cancer is based on histology of testicular mass and increase in level of serum tumor markers [13,14]. Some tumor markers elevate in testicular cancer which are released into the blood by organs, tissues, or tumor cells [14]. There are three tumor markers used to detect testicular cancer: 1) Beta-human chorionic gonadotropin (HCG) levels (normal value: < 1 ng/ml); 2) Alpha 1-fetoprotein levels (normal value: below 16 ng/ml). Increased level occurs in about 8% of patients with seminomas and 60% of those with non seminomatous cancers [2,3,12], 3) Lactate dehydrogenize(LDH) (A cellular enzyme with normal value: < 500ng/ml). Some imaging tests can be used, including: Scrotal Ultrasound, Chest X-ray, Computed Tomography (CT), Magnetic Resonance Imaging (MRI), Positron Emission Tomography (PET).

Finally we can use some medical procedures for diagnosis: Radical inguinal orchiectomy and biopsy.

Radical inguinal orchiectomy: In this procedure testis and spermatic cord are removed through an incision in the groin. Then the testis is examined by a pathologist.

Biopsy: When the cancer diagnosis is uncertain, this procedure used to remove a sample of tumor tissue [14].

References

- Taskinen S, Fagerholm R, Aronniemi J, Rintala R, Taskinen M (2008) Testicular tumors in children and adolescents. J Pediatr Urol 4: 134–137.
- 2. Sunil Shroff. Management of Testicular Tumours, Prof & HOD Sri Ramachandra Medical College & Research Institution, Chennai.
- Li FP, Fraumeni JF (1972) Testicular cancers in children: epidemiologic characteristics. J Natl Cancer Inst 48: 1575-1581.
- Ramezani, Rashid (2006-2007) Testicular tumor. Iranian Annual of National Cancer Registration Report 62: 258.
- Hoenig DM, Santos-Cortes JA, Rechtschaffen TH (2009) Non seminomatous testicular tumors. Medscape Reference Drugs, Diseases & Procedures.
- Dawn Light (2009) Malignant Testicular Tumor Imaging. Medscape Reference Drugs, Diseases & Procedures.
- Shah JP, Kumar S, Bryant CS, Ali-Fehmi R, Malone JM Jr, et al. (2008) A population-based analysis of 788 cases of yolk sac tumors: a comparison of males and females. Int J Cancer 123: 2671–2675.
- 8. Kay R (1993) Prepubertal testicular tumor registry. J Urol 150: 671-674.
- Hansen JL (1967) Tumor of undescended testicle in an infant. JAMA 199: 944–945.
- Young PG, Mount BM, Foote FW Jr, Whitmore WF Jr (1970) Embryonal adenocarcinoma in the prepubertal testis. A clinicopathologic study of 18 cases. Cancer 26: 1065–1075.
- Cox L, Donald JC, Machin GA, Popkin JS, Zacks D (1988) Intraabdominal testis with yolk sac tumor in a 2-year-old child. J Pediatr Surg 23: 775–776.
- (2006) TC-Cancer Testicular Cancer Support.Design by AJT Design & Marketing, Inc. Hosting Courtesy of Christian World Web Hosting. Signs & Symptoms of Testicular Cancer.
- Schmoll HJ, Jordan K, Huddart R, Laguna Pes MP, Horwich A, et al. (2010) On behalf of the ESMO Guidelines Working Group. Testicular non-seminoma: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up. 21 (Suppl 5): 140-146.
- 14. (2010) OmniMedicalSearch.com, Condition and Diseases:Cancer. Testicular Cancer.