

Testicular tumor with clinical picture of febricity of unknown etiology

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We present a typical example of a previously healthy boy, whose febricity of unknown etiology lasting for several months was not taken seriously, regardless of the presence of general symptoms of the disease. He was treated as an outpatient with antibiotics and antipyretics under different diagnoses until he was admitted to the Department for Febrile Conditions of Unknown Etiology of the Institute for Infectious Diseases of the Clinical Center of Serbia. At that point, a diagnosis of testicular tumor of extragonadal origin with bilateral metastatic changes of lung parenchyma and retroperitoneal lymph nodes was made, after which the appropriate treatment was administered.

Key words: febricity, unknown etiology, testicular tumor, non-seminoma, teratoma.

The reason for the increased number of calls to emergency services is febrile condition of unknown origin¹. Nowadays, malignant diseases are a common cause of prolonged febricity². In Serbia, the number of patients with this condition has been markedly increasing. Due to various diagnostic and therapeutic approaches, testicular tumor should be differentiated from other causes of increased body temperature (BT) of an unknown origin³. The errors are more common in young and healthy-looking boys.

Case Report

A 14-year-old boy admitted to the hospital for further investigation of febrile condition of unknown origin. The onset of the disease was sudden with an increased BT up to 39°C accompanied with sore throat, malaise and night sweating. The patient had been taking antipyretics daily. Two months later, pain in the left testis appeared, and he was therefore examined under the diagnosis of orchiepididymitis. A subfebrile condition persisted and was accompanied with dry cough. Chest X-ray was performed twice on an outpatient basis, and the findings were normal.

Upon admission, the patient was subfebrile (37.3°C) with enlarged supraclavicular lymph nodes on the left. Routine urinalysis, serological

tests and blood biochemistry were within normal limits, except for a slightly elevated sedimentation rate. Tuberculin skin test was negative. Chest X-ray showed several ring-shaped, clearly demarcated shadows of soft tissue intensity, bilaterally, which appeared as secondary deposits (Fig. 1). Abdominal ultrasonography (US) revealed isolated (more than 6) increased lymph nodes, adjacent to the aorta, partially confluent, with diameters of up to 30 mm (Fig. 2). The increased levels of beta human choriogonadotropin (hCG, 8.5 U/L [normal range: up to 5]), alpha-fetoprotein (AFP, 19 µg/L [normal range: up to 10]), and lactate dehydrogenase (LDH, 3000 U/L [normal range: 160-320]) confirmed the diagnosis of testicular tumor of grade B2 (tumor larger than 3 cm) + C3 (presence of distant metastases) (high risk, poor prognosis). The patient was treated with cytoreductive chemotherapy in accordance with PVB (platinol, bleomycin, vinblastine) protocol. Lung metastases were reduced after chemotherapy, while isolated metastatic changes adjacent to the aorta formed a conglomerate measuring 55 x 30 x 35 mm. After surgical intervention, histopathological finding of teratoma was obtained.

Discussion

Elevated BT above 38°C lasting more than 15 days, the etiology of which can not be defined

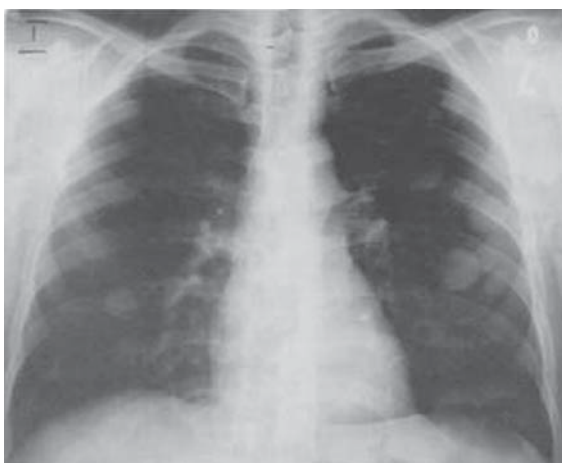


Fig. 1. Bilateral metastatic lesions of lung parenchyma.

by routine laboratory analyses, is considered to be febricity of unknown etiology¹. The imperative in history-taking is to focus on the slightest details^{1,4}. Within the history of our patient, all the causes of febrile condition were ruled out. Thereafter, the physical examination has to be systematical with attention to details. Our findings were: scarlet red throat, markedly enlarged left supraclavicular lymph node, tenderness on palpation in lower back, and pain in the left testis.

Body temperature (BT) measurement is the simplest and most common diagnostic procedure⁴ to determine the character of the BT curve. It is important to be sustained with the administration of antipyretics³. A temperature above 38°C lasting for several weeks or months requires hospitalization. The period before the first diagnosis is made may be challenging, both for the patient and the physician³. Omission to perform the required laboratory analyses (our patient did not undergo laboratory examination at the onset of the disease) makes the cause of the elevated BT intractable in 40% of cases, while misinterpretation of pathological examination leads to the same outcome in 25% of patients (in radiography of one lung, the first metastatic change was omitted). Secondary malignant lung tumors are usually without symptoms if they do not involve the pleura or major bronchi⁵. They are usually found incidentally, on follow-up lung examination. Radiography, as in our case, reveals isolated or multiple clearly demarcated shadows (Fig. 1), micro- or macronodular changes, or irregular

infiltration of lung parenchyma. The common characteristics of heteroblastic dysembryomas (epidermal and dermoid cysts, teratomas, chorioepitheliomas, and seminomas) are slow growth, clear demarcation on radiography, late signs of compression of mediastinal organs, and clear anatomic delineation to the surrounding tissue⁷. Abdominal US showed isolated increased lymph nodes, adjacent to the aorta, partially confluent, with diameters of up to 30 mm (Fig. 2).

Bearing in mind that the patient was a young boy, and the findings of metastatic changes in lung parenchyma and paraaortic lymph nodes, it was obvious that he had testicular carcinoma (incidence: 3/100,000). The tumor initially appears as a small node, which grows and destroys testicular tissue without involving the epididymis. It metastasizes either hematogenously, leading to generalized dissemination most commonly involving the lungs (seminoma), or it spreads by lymphatics along the seminiferous ducts all the way to the retroperitoneal lymph nodes (seminoma or teratoma)^{5,6}. Histologically, the most common are seminomas (approximately 40%) originating from germinative tissue⁶, while somewhat less common are teratomas (approximately 30%) having origin in embryonic tissue and with various histological appearances, which may represent the primitive structure of different tissues^{5,6}. Unfortunately, the development of these tumors does not cause any specific symptoms, and therefore resembles subacute epididymitis. This patient is often initially examined by a physician who is more likely to

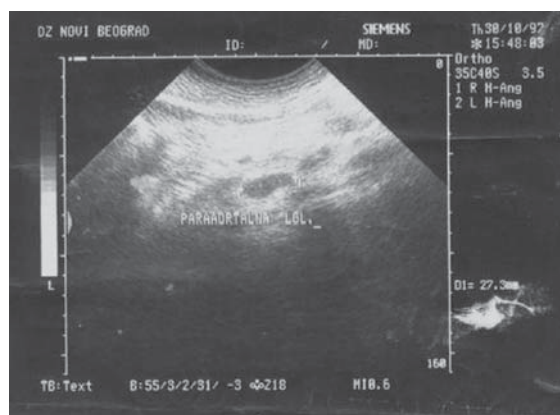


Fig. 2. Ultrasonographic image of increased paraaortic lymph nodes.

make a diagnosis of epididymitis, especially if the pain is present, as in our patient, and to apply conservative treatment, which may lead to the loss of precious time⁵. The increased serum levels of markers - beta hCG, AFP and LDH in our case - confirmed the diagnosis of non-seminomatous extragonadal tumor. Other differential diagnoses include: hematocele or hydrocele, in which tense membranes cannot become wrinkled or pinched with slight tumefaction⁵, and tuberculosis in which the process involves the epididymis only.

After the initial diagnosis of extragonadal non-seminoma, the chemotherapy was performed⁶. As has been suggested in the literature⁵, lymphadenectomy was performed, after which the histopathological finding of teratoma was obtained.

The average five-year survival rate in teratomas is approximately 70%⁸.

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