

Short Commentary

There is no Justification for Shame - Educating Military Environment about Testicular Torsion Risks

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Abstract

Many young males, are serving in military forces around the world, as compulsory or voluntary. Most of them serving far from home and even far from their country.

The facilities of medical assistance is different between the systems, very challenging considering and compering to the civil medical aid.

We would like to raise the awareness of familial Torsion of testis (TT) presence and the need to facilitate the diagnosis of TT in young adults, especially during military service. The presenting signs and symptoms of TT and the considerations that influence its management will be described.

Education and clarification about the manifestations of TT can optimize the effective of early detection and treatment in TT. Thus, education of the soldiers and the military chain of command, as well as the medical teams is recommended. We believe and hope that this knowledge will result in fewer orchiectomies.

Keywords: Testicular torsion; Familial testicular torsion; Education; Soldiers; Military chain of command.

Introduction

Scrotal complaints are relatively common, comprising at least 0.5% of all visits at the emergency department. Testicular Torsion (TT) accounts for roughly 25% of scrotal complaints presenting at the emergency department [1].

We recently came across a case of two siblings, who while serving in the Israeli Defense Force (IDF) as combat soldiers suffered from TT. Both underwent a surgical procedure. In one case, in which the history was short and the torsion was 540 degrees, only detorsion and bilateral orchiopexy solved the problem. The other brother had a history of pain for more than 24 hours and the torsion was 1080 degrees. Unfortunately, orchiectomy and contra-lateral orchiopexy, was performed. This incident drew our attention to cases of TT occurring during military service.

There is a dearth of literature about testicular problems during military service. The Israeli Defense Forces (IDF), published that TT was presented in only 0.12% of young adults, seeking consultation due to testicular pain [2]. A report of 179 British soldiers found that the incidence in older groups of age is higher than was previously reported [3]. The IDF also revealed that the incidence of TT was 1 torsion for every 668 cases in 10 years of testicular blunt trauma [4]. There are few reports in the literature about Familial TT, which may occur in up to 10 % of such cases [5,6].

Etiology

In adolescents and adults, the tunica vaginalis is attached to the posterolateral aspect of the testes, effectively placing the testes. In bell-clapper deformity, the attachment is higher than normal. This might end with the spermatic cord rotating within

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the tunica vaginalis and creating intravaginal torsion [7].

Another predisposing factor for the development of TT is the rapid growth and increase in the testicular tissue volume. This occurrence is normal in puberty up to the age of adolescence, however it may also appear in scrotal diseases as well as in malignancy [8,9]. Physical activity and trauma may also lead to torsion and should be considered more in warriors [10]. The cremasteric reflex, which could also be activated by physical effort or by the cold airflow, was found to be one of the factors contributing to testicular torsion [11]. Nevertheless, the most frequently reported activity leading to TT is cycling [12]. Cycling could cause testicular rotation around their axis more easily between the moving legs.

Clinical manifestations and diagnosis

A new onset of pain, swelling and/or tenderness of the intrascrotal content is defined as an acute scrotum pain (ASP). A rapid onset of the symptoms within minutes or up to a day or two may be described. The differential diagnosis of ASP is wide and the common presentations include torsion of the appendix testis, orchio-epididimitis. Other, less common diagnosis of ASP are: hematocele, varicocele, scrotal hernia, tumors and trauma. However, the most disturbing diagnosis is TT, which may occur in 1 out of 160 men in the first 25 years of life [13].

TT can be considered in cases of systemic symptoms, such as: lower abdominal pain accompanied with nausea or vomiting, ipsilateral scrotal pain, as well as enlargement and congestion of the testis. The testicle will be in a superior position than normal and the appendix testis might be palpated anteriorly. The most significant and pathognomonic sign is the absence of the cremasteric reflex [14].

The history of onset may be spontaneous, exertional, or in fewer instances, associated with trauma [1]. Additionally, around 50% of males with TT reported of prior episode or episodes of testicular pain due to intermittent torsion [15]. It is important to inquire about the history of other male members of the patients' family.

As in other clinical processes, physical examination and the medical history are not sufficient to establish a certain diagnosis. Therefore, imaging modalities should be performed. Ultrasonography examination, if immediately available, can assist in making an accurate clinical decision [16].

Treatment

Urgent surgery and early restoration of blood flow to the ischemic testicle is critical in cases of TT [17]. Therefore, the prompt referral to an emergency department served by urologists is recommended. There is typically a four- to eight-hour window of opportunity before significant ischemic damage occurs. The ischemic damage is manifested by morphologic changes in testicular histopathology and deleterious effects on spermatogenesis [18].

Reported testicular salvage rates are between 90% and 100% if surgical exploration is performed within six hours of symptom onset, while there is a decrease to 23% if symptoms are present for more than 12 hours. The odds of testicular salvage are typically less than 10% or even approaching 0, if symptom duration

is 24 hours or more [19].

Conclusions

TT is the most significant cause of testicular loss, and patient delay in attending primary care is responsible for most of the testicle loss. The period of military service is a risky and might lead to a delay in diagnosis and treatment of TT. Strenuous physical activity and high chances of trauma are common during the military service. In addition, inaccessibility to medical services, as well as the hierarchical structure of the chain of command in the army could also contribute to the delay in the diagnosis and treatment.

Thus, in order to increase the chance to save the testicles, the awareness of early referral to appropriate medical assistance in any case of ASP must be raised among the soldiers and their commanders. A high index of suspicion must be established and delivered to the primary military caregivers and physicians in order to improve and hasten the diagnosis. In addition, the soldiers themselves, must be educated that any testicular pain and/or familial history of TT, can be predictors for having TT.

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