

An Unusual Cause of Acute Scrotum in a 65-Year-Old Man

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ABSTRACT

Testicular pain has several etiologies, including torsion, trauma, inflammation, and malignancy. Testicular torsion is a rare cause of scrotal pain in adult men. Few reports have commented on testicular torsion in the geriatric population. It is more common in young adults, and it usually develops as a consequence of certain congenital abnormalities in pediatric and adolescent patients. We report a case of a 65-year-old man who presented with left testicular pain and bilateral groin swelling for 5 days. Surgical exploration was performed and showed left testicular torsion with a right inguinal hernia. In conclusion, testicular torsion should be considered in the differential diagnosis of an acute scrotum regardless of the patient's age. Our case report of testicular torsion in the elderly patient offers a contribution to literature regarding the presentation and management of adult onset testicular torsion.

INTRODUCTION

Torsion of the testicle is an unusual cause of acute scrotum in the elderly population (1). We present a case of testicular torsion in a 65-year-old man and discuss the probable cause, as well as the relevant clinical outcome.

CASE PRESENTATION

A 65-year-old Malay gentleman with a background history of Parkinson's disease presented in our emergency department with a complaint of bilateral groin swelling for the past 5 days, associated with the gradual onset of pain. He claimed the pain was

much more pronounced on the left side compared to the right. There was no history of trauma or a recent infection, or a prior history of scrotal or inguinal surgery. On examination, there was bilateral inguinoscrotal swelling, which was much more obvious on the right side. However, the left side of the scrotum was very tender and it was difficult to examine. Blood investigations showed a normal white-cell count. With a clinical impression of an obstructed inguinal hernia, the decision was made to perform emergent exploration. Operative findings were an infarcted, torsed left testis twisted on a thickened spermatic cord but no hernia on the left side (Figure 1). There was a right, indirect inguinal hernia with viable bowel. Left orchidectomy, right orchidopexy, and hernia repair were performed. Postoperative

KEYWORDS: Testicular torsion; Elderly; Presentation

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recovery was uneventful and there were no complications. The patient was subsequently discharged from the clinic upon follow-up.

DISCUSSION

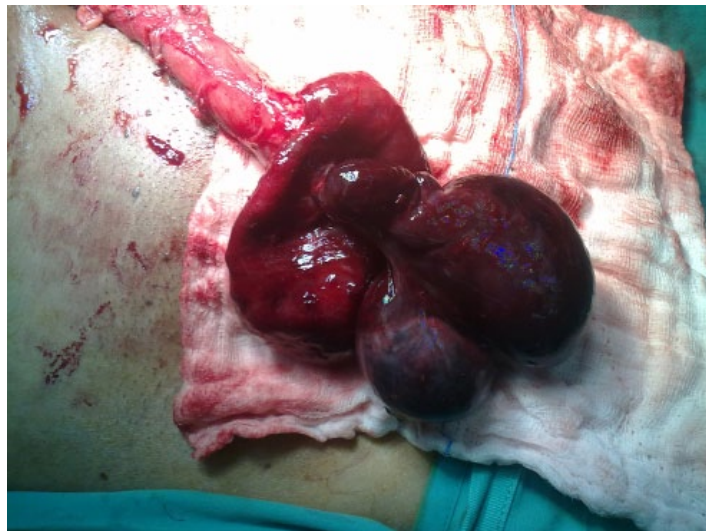
Classically, torsion of the testis is thought to be almost exclusively a disease of the young male population. Kessler and Bauml described testicular torsion as a bimodal age pattern in which the first peak is between age 1 to 2 and another peak is in the adolescent years where 85% of all cases occur between age of 12 and 18 (2, 3). It is uncommon after the age of 40 and it has been suggested that all cases of acute scrotum up to 40 years of age should be explored (4). Thus far, we have not experienced any case of testicular torsion in an adult, let alone the elderly. A review paper on 58 cases of testicular torsion revealed that almost all cases are below the age of 20 and there are only 2 cases after age 50 (3). Another study of 29 patients reported cases of testicular torsion in men as old as 80 years of age (5). It is questioned whether the current understanding of pathophysiology of testicular torsion applies to the elderly population as well.

Besides the intravaginal and extravaginal type of torsion, Ghazali described a third type of torsion associated with cryptorchidism in which there is a long mesorchium (6). Many papers have reported diminishing sizes of the testis in the elderly population (7). Mahmoud et al. noted that the bilateral testicular volume is 29.7 ml in the young population (median age 42 years) and 20.6 ml in the elderly population (median age 72 years), $p < 0.001$ (8). Although described in another paper that the reduction in size is only significant at the eighth decade of life, the testis actually starts to shrink by age 60 (7). Could the atrophied testis gain additional mobility in the vaginal space? It was too hard to develop evidence on this since less than half of all cases of torsion provided detailed operative findings (3). At this point, it can only be said that the cause of torsion in the elderly, as in our case, is idiopathic.

Nonetheless, torsion of the testis in the elderly generally has a less desirable outcome compared to younger patients. A search through literature in the English language identified 16 cases of torsion in patients older than 50, including ours, with sufficient details for review. Seven out of 13 of these patients (53.8%) did not gain appropriate diagnosis in the first clinical consultation, and the testicular salvage rate is 46.7% with orchidectomy performed in 8 out of 15 patients (Table 1) (9-15). Cummings et al. reported a salvage rate of 70.3% in the

Figure 1. The left testis appeared infarcted and the twisted cord is thickened.

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young group (less than age 21, ranging from 8 to 20) and 41% in the older group (age 21 and above, ranging from 21 to 34) (16). Additionally, the same paper also described significantly severe twisting of the cord in the adult group: 585 degrees in the adults compared to 431 degrees in the young.

Does ultrasonography aid in making a diagnosis of testicular torsion? In the detection of torsion of the testis, Doppler ultrasonography has sensitivity and specificity rates of 88% and 90%, respectively (17). Because the testicular survival rate depends on the urgency of surgical intervention, the role of this diagnostic imaging is questionable. It was shown that the performance of ultrasonography increased 2.6-fold in the interval between the patient's arrival in the emergency department and surgical exploration ($p < 0.001$) and there was no significant difference ($p = 0.08$). The necessity of orchidectomy disregarded whether or not ultrasonography was done (18). In fact, an orchidectomy rate of only 2.4% was reported in a study in which immediate surgical exploration was advocated, compared to the rate of around 12% in other studies (4, 19). Therefore, Doppler ultrasonography perhaps plays only a supportive role in the medico-legal aspect when surgical intervention is deemed unnecessary (20). For the purpose that most ultrasonography studies rely on the testicular blood flow pattern, which can be falsely negative due to incomplete

Table 1. A summary of the 16 cases reviewed and revealing the clinical outcome.

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Patients	Authors	Age (years)	Misdiagnosis	Orchidectomy
1	Allen et al. (2)	59	No	Yes
2	Ghazali (4)	Elderly	Yes	No
3	Dennis et al. (9)	53	No	No
4		51	Yes	Yes
5		52	No	No
6	Dixon and Sayers (10)	57	Yes	No
7		53	Yes	Yes
8		Londergan (11)	59	No
9	Londergan (data from other studies) (11)	62	Not known	2 in 3 patients
10		68		
11		69		
12	Blumberg et al. (12)	58	No	No
13	Davol and Simmons (13)	68	Yes	Yes
14	Bhagra et al. (14)	59	No	Yes
15	Ilbey et al. (15)	57	Yes	Not known
16	Ours	65	Yes	Yes

torsion and testicular morphological changes that only present later, it was claimed that the imaging study should include an assessment of the spermatic cord in which a presence of the cord rotation is a highly reliable sign of torsion (21).

In the review of 173 cases of suspected testicular torsion, Molokwu et al. concluded that age should not be used as a discriminating factor in cases of acute scrotum (22). It is hoped that testicular torsion will be better recognized in any age group, resulting in less misdiagnoses and improper management.

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