

Segmental infarction of the testis: can frozen sections avoid orchidectomy?

E. PACELLA¹, F. GRILLO¹, C. LAPETINA², F. CABIDDU¹, L. AURIATI³, G. TUNESI³, L. MASTRACCI¹

¹ Department of Surgical and Diagnostic Sciences (DISC), Pathology Unit, University of Genoa and IRCCS "S. Martino-IST" University Hospital, Genoa, Italy; ² Department of Urology, Civil Hospital, Sestri Levante, Italy;

³ Department of Pathology, "Villa Scassi" Hospital, Genoa, Italy

Key words

Testis • Segmental infarction • Frozen section

Summary

Segmental infarction (SI) of the testis is a rare condition that can masquerade as a mass lesion, thus requiring exclusion of tumour. If clinical exams do not exclude a neoplastic lesion with certainty, orchidectomy is usually performed. A case of SI of the testis is presented; the use of frozen section of the enucleated

mass demonstrated the ischaemic nature of the lesion, so avoiding orchidectomy. The 8 year follow-up was uneventful. The use of frozen section in SI could permit the selection of cases in which testicular-sparing surgery should be considered.

Introduction

Segmental infarction (SI) of the testis is a rare condition usually associated with scrotal pain. SI can masquerade as a mass lesion of the testis, and diagnostic exclusion of a tumour is necessary. Often, clinical assessment cannot rule out the presence of a testicular neoplasm, and hence orchidectomy is performed to reach a definitive diagnosis.

We report a case of SI manifesting as a testicular mass with scrotal pain. Frozen section of the enucleated mass was performed, demonstrating the lesion to be ischaemic, thus avoiding orchidectomy. After long-term follow-up the patient is well and has not referred other ischaemic events in the residual or contralateral testes.

Case report

A 42-year-old white, obese man was admitted to the emergency room with acute onset right testicular pain. He denied any previous testicular pain, urethral dis-

charge or trauma. The pain had arisen spontaneously during daily activity. Physical examination revealed a palpable mass on the superior pole of the right testis. Ultrasound confirmed a small intratesticular, ill defined, oval, hypoechoic area.

Due to the concern regarding the possibility of a testicular infarction (as suggested by the clinically acute behaviour) or tumour (not excluded by ultrasound examination), an inguinal surgical approach was performed the day after admittance. Intraoperatively, the testis showed a brown, soft lesion of 12 mm in diameter, located in the upper pole, under the tunica albuginea and rete testis. Considering the polar location of the mass, it was enucleated and a frozen section was made (Fig. 1-2); based on this, orchidectomy was avoided. Convalescence was uneventful, with complete resolution of scrotal pain. Eco-Doppler of the spermatic artery carried out 3 days after surgery revealed normal blood flow.

After a follow-up of 8 years, the patient is alive and well; there are no signs of disease either in the residual or contralateral testes.

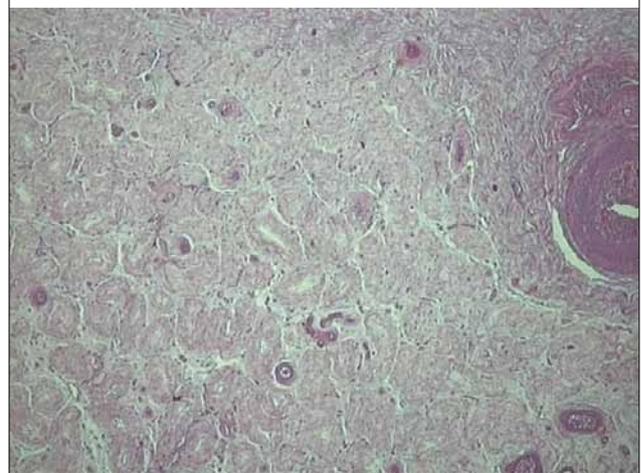
Correspondence

Luca Mastracci, Department of Surgical and Diagnostic Sciences (DISC), Anatomic Pathology Unit, University of Genoa and IRCCS "S. Martino-IST" University Hospital, Genoa, Italy - Tel. +39 010 5553952 - Fax: +39 010 3537803 - E-mail: mastracc@hotmail.com

Fig. 1. Under the tunica albuginea a tan-brown, coarsely wedge-shaped, soft lesion of mm 12 in maximum diameter was observed.



Fig. 2. The presence of colliquative necrosis of both the interstitium and tubules made a diagnosis of segmental infarction possible.



Discussion

SI of the testicle is an extremely rare condition with about 40 previously reported cases¹. The causes are various and most are also associated with massive infarction of the testis². Nevertheless, the cause is sometimes unclear, and infarction is defined as idiopathic.

With certain exceptions, all referred patients were treated by radical orchidectomy. Reasons for orchidectomy consist mostly in the impossibility to discriminate a benign ischemic lesion from a tumour by ultrasound examination^{3,4}. Use of colour Doppler in SI has been shown⁵ to be useful and, more recently, contrast-enhanced ultrasound⁶, the combination of ultrasonography and magnetic resonance imaging (MRI)⁷ or the use of high frequency Doppler ultrasound⁸ have been proposed. The additional use of frozen section biopsy can resolve dubious cases in which imaging techniques are either not available or not discriminatory, or in which surgical intervention is still required to resolve intense testicular pain, thus avoiding unnecessary radical orchidectomy. Only one previous case has been described in which the use of frozen sections avoided testis-sparing surgery⁹, but information on follow-up in this patient is not available.

On the whole, there are no clear indications to suggest a preferred treatment in SI of the testis: in consideration of the potentially problematic diagnosis and infertility issues, radical orchidectomy is the most frequent option. The role of frozen sections could permit the selection of cases, such as in a young patient, in which testicular-sparing surgery should be considered¹⁰. Hence, SI could

be one of the possible diseases that could benefit from this type of management when clinical exams and surgical exploration are not diagnostic for malignancy.

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