Case Report

A Rare Case of Insidious Myointimoma - Case Report

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Introduction

The penis is an uncommon site of soft tissue tumors. Myointimoma is rare, with 12 cases reported in the literature since 2000.[1-3]

It is a benign tumor developed in mesenchymal cells, more specifically in the inner layer of blood vessels. It affects more frequently the glans penis and the balano-prepucial sulcus, or even the penile spongy body. Patient age varies from age 2 to 69.[1]

The injury can be presented as a lump and eventually be confused with soft tissue tumors. Generally it has a fast growth, with an average time of 4 months. We report a case examining the clinical, histopathological and immunohistochemical aspects of this type of neoplasia.

Case Report

Patient 50 years old with antecedent of espinocellular carcinoma of the larynx treated in 2001 by supraglottic laryngectomy with bilateral cervical emptying and adjuvant x-ray, without signs of disease activity. He referred a nodule in the ventral portion of the penis, next to the glans, that appeared 30 years ago and recently had a size increased. The examination detected a nodule having fibro-elastic consistency, mobile, covered by the prepuce, with about 1.5cm, painless. The patient denied having had a trauma or previous local surgical manipulation, collagenoses, diabetes mellitus or autoimmune disease. He had no alteration of the erectile function, pain at coitus or mictional dysfunction.

A total exeresis of the injury was done under regional anesthesia. At dissection, it presented a irregular surface, of brownish coloration, loosely adhered to the urethral spongy body, but with a plan of dissection regarding this latter.

To microscopy, intravascular myointimal proliferation was observed, in multinodular and plexiform architectural arrangement, resembling to the spongy body (Fig 1A).

In the biggest part of the lump proliferation is formed by fusiform cells with ample and eosinophilic cytoplasm, with a fascia arrangement, within a fibromatoid matrix (Fig 1B). The nuclei vary from small to medium size, resenting no atypias or mitoses. Necrosis was not noticed. Morphologically the cells and their arrangement resemble aspects of muscular tissue, while some cells have aspects that resemble fibroblasts.

A immunohistochemical study of the injury was carried through that disclosed positivity for the markers desmine (weakly), calponine and smooth muscle actin

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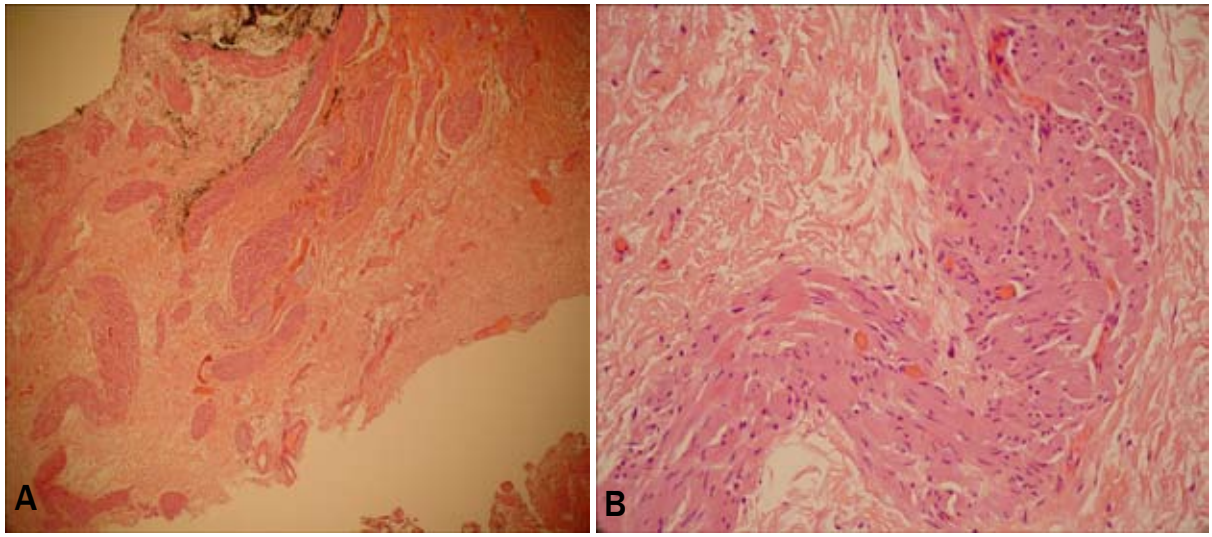

Figure 1 – A. Mesenchymal proliferation in multinodular arrangement (40x). B. Eosinophilic and fusiform cells, arranged in fascia within the fibromixoid matrix (1000x)

(Fig. 2A). The study with p63 marker was negative. Markings for CD34 and CD31 only in vessels located within the multinodular tumor parenchyma. Verhoeff-van Gieson stain demonstrated the intravascular localization of the injury, detaching a fine layer of elastin recovering the myointimal proliferation (Fig 2B).

The patient evolved with a small dehiscence of the operative wound, treated with good evolution by local cares. Followed-up during six months, he did not evidenced recurrence signals.

Discussion

Most penile malignant tumors are espinocellular carcinomas of epithelial origin. Soft tissue tumors, both malignant and benign, are infrequent. Some injuries can affect the penis, from classic soft parts neoplasias such as lipomas, leiomyomas and hemangiomas to tumors such as neurilemmomas and myofibromas and sarcomas. Myointimoma is a recently described rare entity.[2-3]

Normally, myointimomas have a benign behavior. The cause is uncertain, and one speculates both about a neoplastic and a reactional origin. It is described a fast growth that varies from days to months, despite the reported case presented a very bigger time of evolution (30 years). From the twelve described cases, only one presented local recurrence after excision and another one remained stable during for 6 months after incisional biopsy.[1-3]

It is a tumor with morphologic and immunohistochemical aspects presenting miofibroblastic differentiation, suggesting an intra-vascular origin, probably in the cells of the vessels inner layer, involving the penile spongy body.[3]

Myofibromas, one of the main differential diagnoses, generally affect children, with a peripheral muscular component and a hemangiopericytoma-like central one, absent in this case. Although myofibromas can involve vessels, unlike myointimomas (observed using Verhoeff-van Gieson stain) they have no intra-vascular presentation.

Plexiform fibrohistiocytomas also has miofibroblastic differentiation, but they present a greater proliferative activity, with at least some degree of cellular atypia.

Intra-vascular nodular fasciitis is also considered in differential diagnosis, but generally shows mitoses, a bigger myxoid component, besides intralesion lymphocytary infiltration.[2]

Fetch et al.[3] reported in seven cases of myointimomas, positivity for markers muscle specific actin, smooth muscle actin and calponine, and a weak reaction to desmine, what favors the hypothesis of miofibroblastic differentiation; it still showed negativity for markers CD34, CD31, VIIIAg factor and S-100 protein. The present study showed positivity for the same above-mentioned muscular antigens (Table 1).

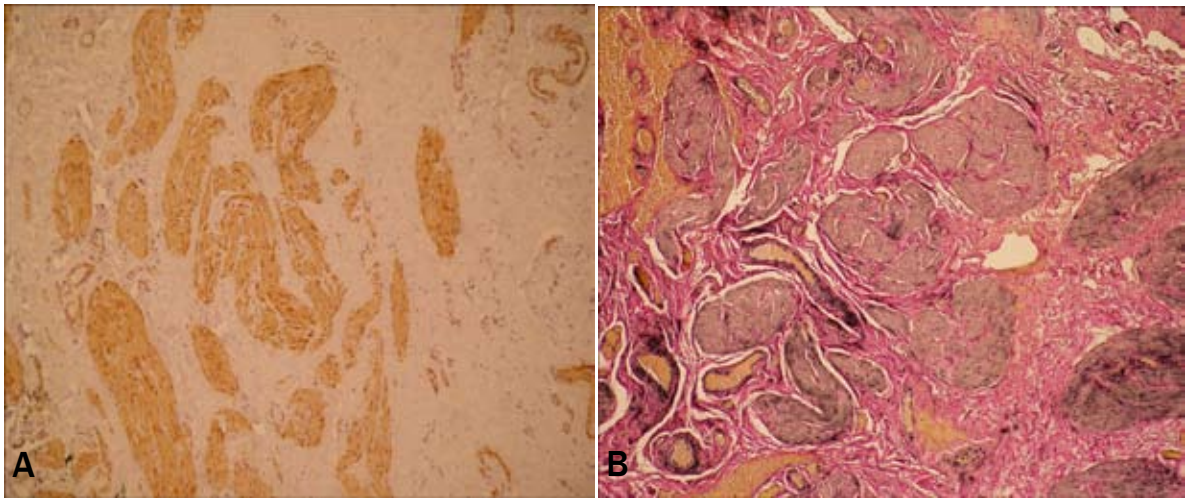

Figure 2 – A. Diffuse Positivity for smooth muscle actin in tumor areas. B - Verhoeff - Van Gieson stain, showing the presence of elastic fibers around the myointimal proliferation, standing out the intra-vascular character of the injury

Table 1 - Comparison of immunohistochemical results between Fetsch et al Data and the reported case

Antigen/Antibody	Fetch et al Positive cases/ tested	This case report
Smooth muscle actin	7/7	(+) difuse
Calponine	4/4	(+) difuse
Desmine	7/8 (weak)	Weak
CD34	0/6	(-)
CD31	0/6	(-)
P63	NA	(-)

In the reported case, an aspect differs from the literature: the insidious character of the injury that remained stable during three decades before its growth.

As this is a rare tumor, data are limited, especially regarding follow-up. Surgical excision allows an adequate anatomopathological diagnosis and the treatment. It is a diagnosis that both the urologist and the pathologist must have in mind when evaluating an injury of penile soft parts.

References

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