An unusual tumor of the spermatic cord: myositis ossificans.

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Summary.- OBJECTIVES: Tumors of the spermatic cord and epididymis are rare, and their exact incidence is difficult to determine. Ninety percent of extra testicular tumors within the scrotum are found in the spermatic cord, where 30% is malignant (1).

METHODS: In this case report we present an unusual spermatic cord tumor, i.e. myositis ossificans (MO). To the best of our knowledge, MO of the spermatic cord has not been reported before in the literature.

CONCLUSIONS: MO should be considered in the differential diagnosis of the spermatic cord tumors.

Keywords: Spermatic cord tumors. Myositis ossificans.

Resumen.- OBJETIVOS: Los tumores del cordón espermático y el epidídima son poco frecuentes; su incidencia exacta es difícil de determinar. El 90% de los tumores escrotales extratesticulares se localizan en el cordón espermático, de ellos el 30% son malignos (1).

MÉTODOS: Presentamos el caso de un raro tumor del cordón espermático: miosisitis osificante (MO). De acuerdo con nuestros datos, no se había comunicado antes un caso de MO del cordón espermático en la literatura.

CONCLUSIONES: La miosisitis osificante debe considerarse en el diagnóstico diferencial de los tumores del cordón espermático.

Palabras clave: Tumores del cordón espermático. Miosisitis osificante.

CASE REPORT

A 53-year old man admitted to our outpatient clinic because of a left sided slowly growing inguinal mass that he first noted 1 year ago. The patient had no history of trauma. The physical examination revealed a hard, mobile and painless inguinal mass (6x5 cm) with minimal scrotal hydrocele on the left side. The extra-genital organ examination was otherwise normal. The patient had no other symptom or co-morbidity. Inguinal and scrotal ultrasound revealed normal testicles and a calcified mass in the left inguinal canal. Pelvic magnetic resonance imaging demonstrated a heterogeneous mass of the left spermatic cord (7.5x5x4 cm) and after administration of contrast agent, an enhancement with a rim of peripheral hypo-intensity and central hypo-
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intense and hyper-intense areas was reported (Fig. 1). In the left inguinal exploration, a hard, solid mass of the mid-spermatic cord was found. This mass was separated from the surrounding structures with blunt and sharp dissection and left inguinal orchiectomy was performed. The mass was hard, and well circumscribed measuring 8x5.5x3.5 cm. It could be cut with a bone saw and the cut surface resembled a bony fracture callus (Fig. 2). On microscopic examination, bone trabeculae intermixed with dense fibrous tissue, with occasional areas of fat cells could be seen. Bone trabeculae were mostly of mature lamellar type, but at the periphery of the lesion, newly formed osteoid rimmed by plump osteoblasts was present (Fig. 3). There was no atypia in the spindle cells or osteoblasts. Scanty mitotic activity could hardly be detected only in the spindle cells. Fibrous component was richly vascularised with prominent vascular dilation. The periphery of the lesion was bordered by fibrous tissue. There was no cartilaginous component, no inflammation or giant cells. The center of the lesion had more fibrous tissue than the periphery, showing a "zonation phenomenon". With these features, the lesion was reported as extra osseous localized nonneoplastic bone formation compatible with MO of spermatic cord.

DISCUSSION

Myositis Ossificans (MO) is an extra osseous nonneoplastic formation of bone and cartilage (2). It is a localized, self-limiting ossifying process that follows mechanical trauma in most cases. MO usually develops in athletic adolescents and young adults after an episode of trauma. The lesion arises in the sub-cutis and musculature of proximal extremities. The clinical findings are related to its stage of development; in the early phase, the involved area is swollen and painful, and within the subsequent several weeks, it becomes more circumscribed and firm. Eventually it evolves into a painless, hard, well demarcated mass (3). MO is a benign, self limiting process, the prognosis is excellent.

Fig. 1: MRI, Left inguinal mass rising within the spermatic cord.

Fig. 2: Spermatic cord mass with whitish areas of bone appearance. Testis is normal except for the presence of hydrocele.

Fig. 3: (Hematoxylin and Eosin x 40): Mature bone trabeculae rimmed by osteoblasts and vascular fibrous tissue. The peripheral area has newly formed osteoid (arrow head).
Four types of MO have been described. The first and most common type is MO circumsicta. It is a localized, self-limited form that occurs following blunt, penetrating, thermal, or iatrogenic trauma (4). The second type occurs after closed head injury or spinal cord trauma (4). A third type known as pseudomalignant MO occurs in the absence of any history of trauma (4). The fourth type is known as fibrodysplasia ossificans progressive, and it begins early during the first decade of life. It is a rare genetic disorder, and characterized by progressive heterotopical ossification, which accumulates at multiple periarticular sites and may cause patient's complete immobilization (4).

The differential diagnosis of MO includes proliferative myositis, nodular fasciitis, parosteal osteosarcoma, traumatic fibrosis and soft-tissue osteosarcoma (4). A biopsy confined to the inner and middle cellular layers may result in a sampling error on the erroneous diagnosis of sarcoma or nodular fasciitis (4).

CONCLUSIONS

MO should be considered in the differential diagnosis of the spermatic cord tumors.

REFERENCES AND RECOMMENDED READING (*of special interest, **of outstanding interest)


