Solitary fibrous tumor of the pelvis:
an uncommon soft-tissue tumor.
A case report

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Introduction

Solitary fibrous tumor (SFT) is an uncommon soft-tissue tumor, usually arising from pleura, also if, in the last years, extrathoracic SFTs have been reported with increased frequency. Few case of pelvic SFT, usually with short follow-up, are reported in literature 1-3. We describe a SFT originating from the pelvic space with 5-year follow-up and analyze the histological, clinical and therapeutic features of this tumor.

Case presentation

In November 2004, a 76-years-old man presented with a low abdominal pain, acute urine retention and constipation. Physical examination revealed a palpable abdominal mass in the pelvis, dislocating bladder and rectum. Finally, trans-rectal needle biopsy suggested the diagnosis of SFT. En bloc excision of tumor and rectum (because of strong adhesions) was performed. Histological examination showed spindle and fibroblastic-like cells dispersed in collagenous areas with positive stains for CD34, bcl-2, CD99 and it confirmed diagnosis of SFT. No postoperative complications occurred, only vesico-sphincter dysynergia was found by urodinamics. After 5 years, patient is disease-free. SFT is, usually, benign tumor with slow growth and excellent prognosis. Complete surgical resection is the only curative treatment. However, 10-15% of SFT are malignant and histological findings cannot always predict clinical behaviour. For this reason, careful and long term follow-up is necessary after surgery.

KEY WORDS: Pelvis, Pelvic space, SFT, Solitary Fibrous Tumor, Spindle cells.

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Immunohistochemical analysis showed strong positive marking for CD34, bcl-2, CD99, but negative stain for SMA and S-100. The final diagnosis was made as benign solitary fibrous tumor of the pelvis. No postoperative complications were observed, also if urodynamics revealed vesico-sphincter dyssynergia. To date, after follow-up of 5 years, patient is disease-free.

**Discussion and Conclusions**

Even tough STS was first described as pleural neoplasm⁴, in the last years the number of extra-pleural SFT reported increased exponentially, probably because until 20 years ago, most of the SFTs, for lack of clear criteria, were diagnosed from pathologist like hemangiopericytomas⁵.

Typically, this tumor presents as well-defined and slow-growing mass dislocating and compressing neighbor organs, also if there were reported same cases associated with secretion of insulin-like growth factor 2⁶,⁷. Microscopically SFT shows a classic pattern (“patternless pattern”) with spindle cells in collagenous background. Immunohistochemically it commonly expresses CD34, bcl-2, vimentin, CD99 and, sometimes, also epithelial membrane antigen (EMA) and smooth muscle actin (SMA). It is usually negative for S100 protein, desmin and cytokeratins ²,⁸.

In the pelvic space, preoperative diagnosis can be established by transrectal needle biopsy ⁹,¹⁰.

About 10-15% of solitary fibrous tumor are malignant ¹¹,¹². Criteria of malignancy include high cellularity,
nuclear pleomorphism, area of tumor necrosis and high mitotic activity [>4/10 high-power fields (HPF)] \(^{11,13}\). CD34 expression can be lost in high-grade tumours, similar to the other soft-tissue tumours \(^{14,15}\). Metastases occur in lungs, liver and bone. Clinical behaviour is, however, unpredictable \(^{16}\): even tough in most of the cases prognosis after complete resections is good, histological findings cannot always predict clinical behaviour and careful long-term follow-up is necessary \(^{17-19}\). Complete surgical excision is the treatment of choice, while adjuvant chemotherapy and radiotherapy for malignant forms, due to their rarity, are not evaluable.

**Riassunto**

Gli Autori descrivono un raro caso di Tumore Fibroso Solitario (TFS) a localizzazione pelvica in un paziente di anni 76 esordito con ritenzione acuta di urina, dolore addominale ai quadrandri inferiori e stipsi. Gli esami strumentali effettuati (ecografia procistica e transrettale, TC con m.d.c RM) evidenziavano la presenza di massa espansiva a verosimile localizzazione retroperitoneale, grossolanamente rotondeggiante, di circa 12,5 cm di diametro, ad ecostruzione disomogenea. Nella norma l’Rx torace, gli esami ematochimici ed i marcatori tumorali esaminati (AFP, CA 19.9, CEA, PSA, TPA). Una biopsia tran-rettale eco-guidata della lesione evidenziava un quadro morfolologico e immunofenotipico coerrente con la diagnosi di Tumore Fibroso Solitario. All’intervento chirurgico per l’exeresi della neoplasia (laparoscopy) si riscontra una massa ovalariforme di cm 17x10x9, capsulata, a peduncolo e la resecabilità.

La completa escisione chirurgica della neoplasia si è dimostrata essere di solito curativa e non vi è necessità di radioterapia o chemioterapia postoperatoria, considerando che le sedi extrapleuriche sono diventate un’entità nosologica nota solo da pochi anni è, a nostro avviso, razionale sottoporre i pazienti ad un follow-up accurato a lungo termine.

**References**

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