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SACRAL CHORDOMA *EN-BLOC* RESECTION AND LUMBAR-ILIAC STABILIZATION

Ruy Yoshiaki Okaji[1], José Marcondes da Silveira Jr[2], Milton Kanenori Nakano[3], Leandro Tomokazu Kiuti[4], Maria Cecília Nieves Teixeira Maiorano[4]

Chordoma is a rare malignant bone tumor originated from embryonic remains of notochord. Restricted to the axial skeleton, it is more frequently found in the sacrococcygeal (60%) and cervical spine (30%) areas. It occurs with a frequency twice larger in man than in women and it is uncommon in people with age under 40 years, occurring predominantly between the 5th and 7th decades of life[1,3]. The diagnosis is performed through the clinical features, physical examination, including rectal touch and image, being the computed tomography (CT) and the magnetic resonance imaging (MRI), the main methods to delimitate the local extension of the tumor[2]. Because of its unfavorable evolution, that is, slow, with unspecific symptoms and locally aggressive, its precocious diagnosis is difficult to be performed. According to the literature, the most frequently reported symptomatology is pain[3,4,11]. Most of the sacral chordomas are initially presented with a considerable extra axial tumoral growth[3,4]. Metastases are not frequent and most of the pathologists consider chordomas as on a low malignant degree. The differential diagnosis involves giant cell tumors, chondrosarcoma, lymphoma and metastatic adenocarcinoma. The surgical treatment is the only healing form, but, due to the possibility of impairment on neural and adjacent structures by the tumor, its total resection results in important functional deficits[5].

We report the case of a female patient with swelling and pain on the sacral area and partial loss of strength of inferior limbs with evolution in one year.

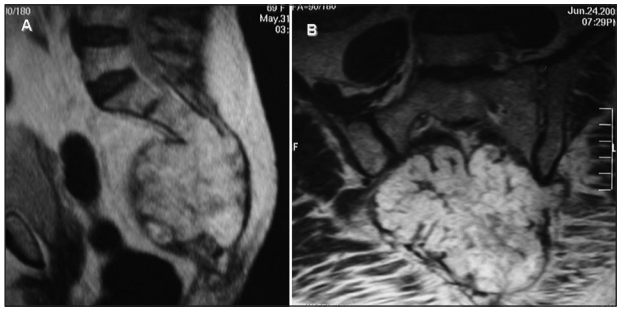

Fig 1. Sagittal (A) and coronal (B) MR images of preoperative evaluation of the patient evidencing tumoral processes involving sacral area below S1 level.

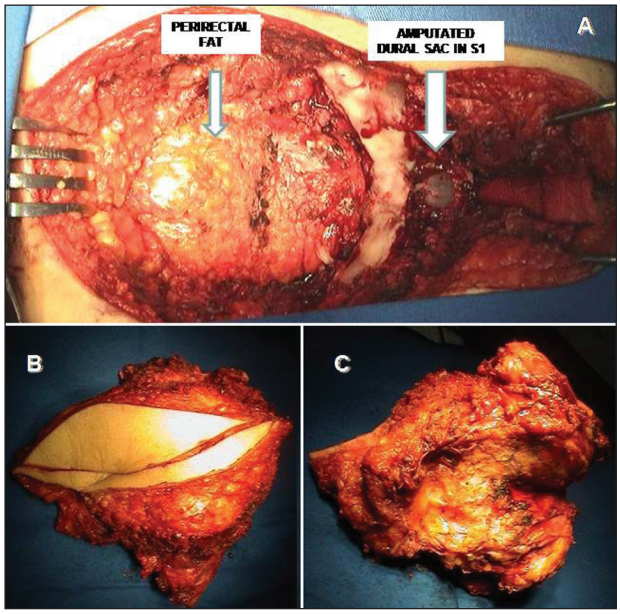

Fig 2. (A) Posterior resection with patient in ventral position. (B) and (C) Surgical piece removed in monobloc presenting radical resection of the tumor

CASE

A 72 years old, white, woman referring pain in left inferior limb with an evolution of one year, burn-like, continuous, progressive, with slight relief when using painkillers and nonsteroidal antiinflammatory drugs (NSAIDs). She refers progressive loss of strength in this same limb, evolving, in the last 2 months, to urinary and fecal retention, and tingling in the genital area. On clinical examination, a swelling in the sacral area was observed, painless on palpation and without inflammatory signs, with hardened consistency. Pain in left inferior limb following the same

RESSECÇÃO *EN BLOC* DE CORDOMA SACRAL E ESTABILIZAÇÃO LOMBOILÍACA

Neurosurgery Service - Clinical Hospital of the Marilia Medical School - Marilia SP, Brazil (FAMEMA): [1]Assistant Professor of Neurosurgery, FAMEMA; [2]Orthopaedic Surgeon, FAMEMA; [3]Oncologist Surgeon, FAMEMA; [4]Medical Student, FAMEMA.

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Dr. Ruy Yoshiaki Okaji – Avenida Monte Carmelo 800 - 17519-030 Marília SP - Brasil. E-mail: okajiryo@yahoo.com.br

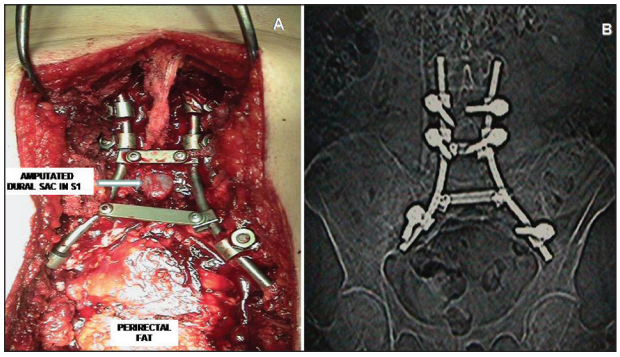

Fig 3. (A) Stabilization including lumbar-sacral fixation and coalition. (B) Postoperative AP X-ray film obtained after total sacrectomy associated to lumbar-sacral stabilization for sacral chordoma treatment.

way as S1. Decrease of the motor activity (plantar flexion grade 2) with abolished Achilles reflex. Hypoesthesia in sellar area. Pelvic MRI has shown an expansive process below the S1 level (Fig 1). Needle biopsy was compatible with chondrosarcoma.

She was submitted to the en-block resection of the lesion, with previous and posterior approach at the same surgical moment. Patient in dorsal decubitus with support under the lumbar-sacral area, under general anesthesia; performed transperitoneal access to the lumbar/sacral transition area, being visualized the lesion (Fig 2). We performed clotting of the nourishing vases of the lesion (branches of the iliac arteries), as well as venous ligation. Next we performed sacral osteotomy between S1 and S2.

Posterior via: patient in ventral decubitus, elliptical incision around the sacral swelling extending to the L4 spinous process, exhibiting lamina and transversal processes from L4 to S1; dissection of the tumoral mass, with resection of a large part of the gluteus musculature bilaterally; laminectomy L5 and S1 up to identification of S1 roots, being accomplished ligation of the dural sac below that level and amputation. Concluded S1-S2 sacral osteotomy followed by sacral amputation with in-block retreat of the lesion with exiguous surgical margins (Fig 2). Performed fixation with pedicular and iliac screws on L4, L5 and iliac bone, with good stability (Fig 3) and precocious ambulation (15 days). Posterior anatomopathological revealed histology compatible with chordoma.

The patient, now with 1 year and 8 months of folow-up, ambulates with help of a walker, has plegia of the left S1 root, urinary incontinence and fecal retention.

We received the approval from Ethics Committees of Marilia Medical School and the informed consent from the patient permitting this publication.

DISCUSSION

The image methods and histopathology have important roles on the diagnosis and on determining the treatment of those tumors. In spite of the radical resection is the best treatment for malignant sacral tumors, the total sacrectomy for such tumors has been used in few situations, mainly in those resistant to non-interventionist therapies[4-7], it has been reported a larger recurrence period for patients treated with total resection than for those with subtotal resection[8].

The extension of the sacral resection determines the pelvic stability and the need or not of having a reconstruction. However, the total sacrectomy with or without retreat of ileum adjacent parts results in complete dissociation of the spine and pelvis causing both vertical and rotational instability. Thus, there is need of a lumbar-iliac reconstruction for reestablish the pelvic stability[7,9].

The functional consequences for the patient should be clearly discussed in the preoperative evaluation[7].

Because of the high risk of recurrence of this disease, all of the patients should be seriously followed-up with MRI or CT[8].

We emphasize the need of a precocious diagnosis, resection with appropriated margins and improvement of surgical techniques, image studies and adjuvant therapies so that we can obtain a better prognostic for those patients. Multiprofessional approach for the patient is fundamental for the physical rehabilitation and psychological support, for improving the patient's quality of life and postoperative clinical follow-up[10-12].

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