v. 2, n. 4, 2022

International Journal of Health Science

SACROCOCCYGEOUS CHORDOM - 2 - TIME ACCESS

Jader David Ricco
http://lattes.cnpq.br/0141333682486296

Seiji Miyata
http://lattes.cnpq.br/257050146780877

Marcus de Oliveira
http://lattes.cnpq.br/0337218771249646

Aluisio Miranda Reis
http://lattes.cnpq.br/1929608570744183

Marina Reis Thiébaut Pereira
http://lattes.cnpq.br/9013230980534791

Lucas Kretli Santos
http://lattes.cnpq.br/9020497685831383

Vitor Lopes Sabioni
http://lattes.cnpq.br/8884693938501451

Pedro Ivo Cordeiro de Souza
http://lattes.cnpq.br/6306788558210180

Guilherme Souza Amorim
http://lattes.cnpq.br/9092754729049898

Bernardo Xavier Gomes
http://lattes.cnpq.br/9343404744457420

Thomaz Quimquim Woelffel Ferreira
http://lattes.cnpq.br/1345666998026865

Suzana Cristina Ricco
http://lattes.cnpq.br/9780646782634419

Abstract: Cordoma is a rare malignant bone tumor that is restricted to the axial skeleton, which originates in one of the remnants of the primitive notochord. Most cases are seen in the fifth decade of life, being twice as common in males. In the present study, a resection with a double access route was used, being them abdominal and sacral by an interdisciplinary team composed of oncological surgery and neurosurgery. The objective is to provide greater ease in performing vascular control, rectal and ureteral release, and marking the proximal sacral transection point. We consider the dual access safer, offering better exposure of the lesion.
Keywords: Chordoma, sacral chordoma, chordoma surgery.

INTRODUCTION

Cordoma is a rare malignant bone tumor that is restricted to the axial skeleton, originating from the remnants of the primitive notochord. It has a predilection for the sacrum (50%), cervical spine (35%) and mobile segments of the spine. Most cases are seen in the fifth decade of life, being twice as common in males. It has slow growth, but with aggressive local behavior. Metastases are uncommon and occur late in the course of the disease to lung, bone, soft tissue, lymph node, and liver.

Patients usually present with advanced disease because their symptoms are vague and indolent, such as pain in the lower back or buttock of varying duration. Unfortunately, most cases are diagnosed after bladder or bowel function has been compromised.

The tumor has a delicate pseudocapsule, in which extensive occult or satellite lesions are frequent. Thus, local recurrence is common, and usually occurs due to failure to achieve clear surgical margins. Chordoma is insensitive to chemotherapy and radiotherapy, so the mainstay of treatment is adequate surgical excision.

Tumors located below S2 usually lead to impaired sphincter control, perineal sensitivity, sexual function and gait stability.

In most resections from S3 onwards, the bladder can be preserved, but in a large number of cases, the anus and rectum are resected together with the tumor.

METHODS

In our service, we used a resection with a double access route, being them abdominal and sacral, in two surgical stages.

The first stage corresponds to the anterior approach, through median laparotomy, which makes it easier to perform vascular control with ligation of the internal iliac arteries, rectal release of the distal ureters, diversion of the intestinal transit (colostomy) and marking of the proximal transection point of the sacrum. This route also offers better exposure of the lesion. At the same time, alcoholization of the lesion with absolute alcohol is performed.

The next step leads to tumor cytoreduction, with radiotherapy programming with a limit of 60 GY, for 30 days. The patient remains in hospital during this time.

Subsequently, sacrectomy is performed by posterior access, with preservation of adjacent structures.

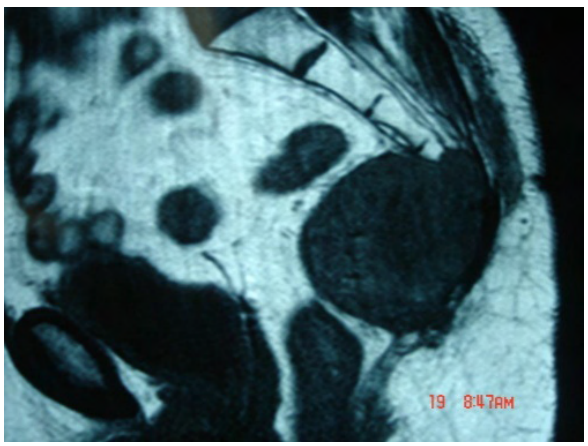

Figure 1: RNM cordoma hepatic sacral

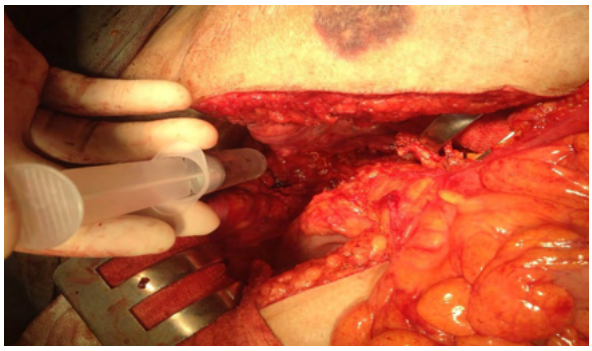

Figure 2: Tumor alcoholization by previous access

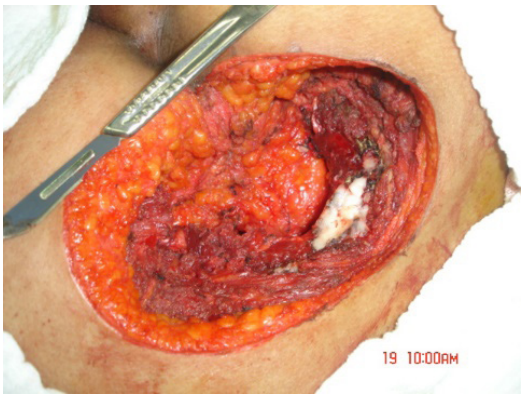

Figure 3: Surgical resection – Later Access

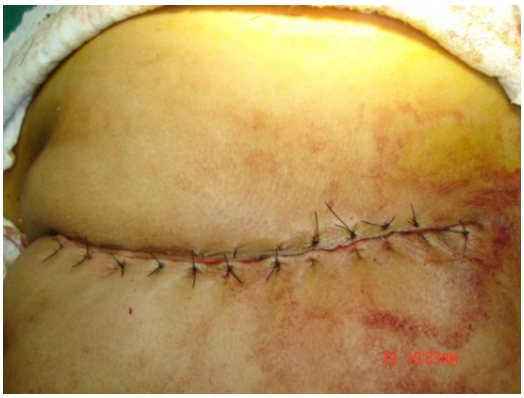

Figure 4: Postoperative appearance immediate

RESULTS

We obtained a reduction of more than 80% of the tumor volume, after the first and second stages, in 100% of the cases and posterior asacrectomy, performed in the 3rd stage, with preservation of the main nerve roots, was possible in all patients.

The quality-of-life measure and Karnovsky index were satisfactory at 1-year follow-up.

There were better results than those described in the current literature, regarding; preservation of neurophysiological functions, immediate sacral reconstruction, preparation of posterior closure and delayed reconstruction.

DISCUSSION

In a series of 8 cases, Gennari et. Al, demonstrated the feasibility of resection with an exclusive posterior access, while the abdominosacral approach has been shown to be safe and with better exposure of the lesion.

The preservation of anal sphincter control, urinary and sexual function and motor skill is directly related to the level of proximal osteotomy and nerve resection.

Preservation of at least one of the roots of S3 is enough to maintain bladder function – one third of the sacral nerves intact: minimal sequelae.

Osteotomy at S1 level promotes anal incontinence, need for intermittent bladder catheterization and external supports for ambulation

About 50% of patients who underwent resections at the S2 level or lower did not show motor changes and maintained the ability to maintain good bowel and urinary control.

CONCLUSION

The resection of giant sacral chordomas and those above S3, in two surgical stages, can be performed with satisfactory results in terms of morbidity and quality of life, in addition to offering better anatomical and aesthetic results for the patient.

These results are possible due to better exposure of the lesion and release of adjacent structures in the first time, tumor size reduction in the second and third time with preservation of nerve roots.

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