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:
8.3 (3~11) . 3
, 1 2 , 3 3
, 1 2 , 3 3 가
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1 1 2 1 1 , 2
, 1 가 . 1 1 , 2
, 1 가 , 1
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8
가
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, , , ,

가 , 가 ,
가 가 3,24),
가 14).

‘upward arched transverse incision’ 가

1988 2000 가 가 1 ‘Mercedes star incision’, three-limbed incision²³⁾ .
 4 , 1-2 가 1 , 2-3
 가 1 , 3 가 2 ,
 가 3 , 가 1 1 2 , 3
 61 (54~67), 2 3 3
 8 4 (3 ~ 11) (Table 2).
 가 ,
 1-2
 가 1 , 3 가 1 ,
 가 2 ,
 9×8×6 cm (Table 1). 1
 3 . 1
 가 , 가 2
 1
 (colostomy) , 1 가

Table 1. Details of 4 cases with sacral chordoma

Case	Age	Sex	Sx	Duration	Location	Size(cm)
1	54	M	Coccygodynia	1 Y	S-C junction	10 × 8 × 8
2	6	M	Coccygodynia	4 Y	S3-4	10 × 9 × 7
3	6	M	Coccygodynia	1 M	S-C junction	5 × 4 × 3
4	62	F	Coccygodynia	3 Y	Below S1-2	12 × 10 × 5

Table 2. Postoperative functions related to preserved sacral nerves

Case	Approach	Level of resection	Most caudad sacral N. spared	Bladder fx	Bowel fx
1	P	S3-4	S3, Lt	+	+
2	P	S2-3	S3, Rt	CIC or foley	Constipation
3	P	S3	S3	+	Constipation (med*)
4	A & P	S1-2	S2, Lt	Mild incontinence	Mile's op

* medication for constipation

10
 . 1
 , 1 , 1 11
 (Table 2). 가 가 1 3
 1 가 (Fig (Fig. 2)(Table 3).
 1), 1 8
 1 . 1 1
 2

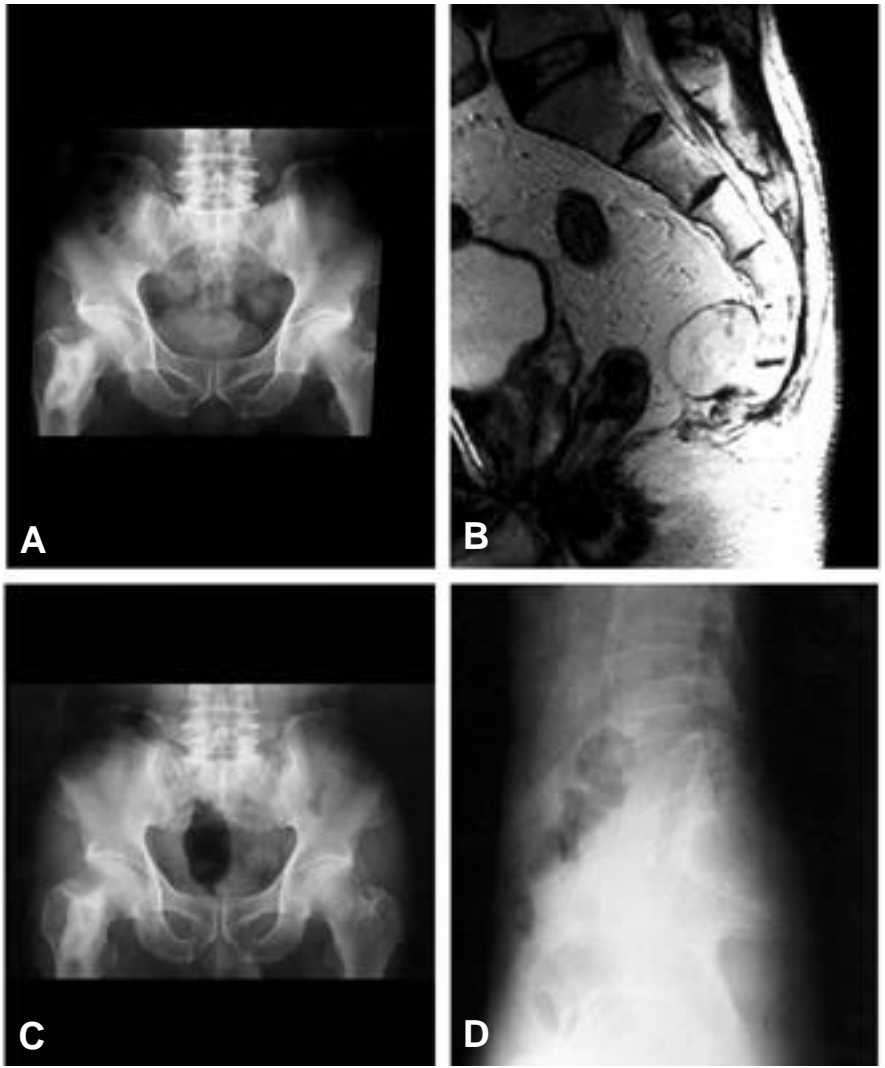


Fig. 1. 67-year-old male had a coccygodynea for a month. (A) Plane radiograph shows an osteolytic destruction of the right distal area. (B) T-2 weighted sagittal magnetic resonance image shows uneven signal intensity mass arising from the sacrococcygeal junction. (C and D) After partial sacrectomy at S3 segment, there was no local recurrence or metastasis at 9 years follow-up.

1 가 10 cm 1
 2 , 9 가
 , 10 cm 3
 50% , 가 가 1
 3 , 가 15,18) 1 3
 3 1 , 1
 가 3 1 11 ,
 가 foley catheter 1
 가 가
 2
 1 4 8 (3 ~ 11)
 3 3 10
 가 Cheng ¹⁾ 5 86%

가 ¹⁵⁾
 Diaz ²⁾
 (omentum)

8
 , 가

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Abstract

Long-Term Results of Surgical Treatment for Sacral Chordoma

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Purpose: To evaluate the long term results of surgical treatment for sacral chordoma.

Material and Method: We reviewed the records of 4 patients with sacral tumor treated surgical resection. Mean follow-up duration was 8.3 year(3~11). All cases were performed complete resection of tumor mass through posterior approach in 3 cases and anterior-posterior approach in one. The most caudal nerve-roots spared were the second sacral roots in one and the third sacral roots in 3 cases. Functions of voiding and defecation including neurological symptoms of lower extremities, other complications of surgical treatment, and local recurrence or distant metastasis of tumor were evaluated.

Result: There was no motor deficit in all cases, but radiating pain was developed in one and wound infection in one. Bladder function was preserved in 2 cases, intermittent incontinence in one, and doing intermittent catheterization in one. Bowel function was preserved in one and 2 cases were suffered from constipation. At the last follow-up, disease-free was in one, local recurrence in one, and local recurrence with distant metastasis in one.

Conclusion: The result of surgical resection for sacral chordoma is satisfactory showing average 8 years survival. Early detection and aggressive surgical treatment is the best to prolong survival and to minimize functional deficit with preservation of upper sacral nerves.

Key Words: Sacrum, Chordoma, Complete resection, Long-term result

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