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Chondroblastoma of the First Lumbar Vertebra -A Case Report -

Byung-Joon Shin, M.D., Tae-Kyung Yun, M.D., Kang-Chul Lim, M.D., Jae Chul Lee, M.D.,
Kyung-Je Kim, M.D., Dong-Won Kim, M.D.* and Yon-Il Kim, M.D.

Department of Orthopedic Surgery, Department of Anatomical Pathology
Soonchunhyang University College of Medicine, Seoul, Korea*

- Abstract -

Study Design : A case report and review of the literature.

Objectives : To discuss the chondroblastoma of the lumbar spine and review the literatures.

Materials and Methods : A 36-year-old woman had back pain and pain radiating to the left lateral abdomen. Straight leg raising was not limited. Plain roentgenograms show a small round radiolucent area in left L1 vertebral pedicle and expansile sclerotic margin in L1 vertebral body. T1-weighted MR images show the lesion displaying low signal intensity, T2-weighted images show high signal intensity, Gadolinium enhanced images show a necrotic area with low signal intensity in the lesion.

Results : The mass of left L1 transverse process and pedicle was excised through posterior approach and pedicle screws were inserted T12 and L2 pedicle. L1 vertebral body was excised through anterior approach and a titanium mesh was inserted. It was a ovoid mass, measured $2.3 \times 2 \times 1.5$ cm in size and histologically diagnosed as chondroblastoma consisting of chondroid matrix and chondroblast. Soft tissue nodule shows chicken-wire calcification. All the symptoms were relieved at 14 months follow-up and no evidence of recurrence on follow-up roentgenogram and bone scan. However, the patient had persistent lower back pain.

Conclusions : A case of chondroblastoma in L1 vertebral body was successfully excised by combined anterior and posterior approach and stabilized with a titanium mesh.

Key Words : L1 vertebral body, Tumor, Chondroblastoma

Address reprint requests to

Byung-Joon Shin, M.D.

Department of Orthopaedic Surgery, Soonchunhyang University College of Medicine, Bucheon Hospital
#1174, Joong-dong, Wonmi-gu, Bucheon, 420-021, Korea

Tel : 82-32-621-5259, Fax : 82-32-621-5414, E-mail : schsbj@hosp.sch.ac.kr

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Fig. 1-A. Preoperative lumbar AP radiograph showing osteolytic lesion on left L1 pedicle.

B. Preoperative lumbar lateral radiograph showing enlarged pedicle, osteolytic lesion on upper L1 body with sclerotic margin.



Fig. 2. Preoperative CT scan of first lumbar vertebra shows osteolytic lesion on L1 body and left pedicle. Soft tissue and bone fragment was surrounded by sclerotic bone in osteolytic lesion.

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1 1
36 1
70
1

1A).

(Fig. 1B).

1

(Fig. 2).

T1, T2

(Fig. 3).

1, 1

12, 2

12, 1

1

2.3 × 2 × 1.5

cm



Fig. 3. Preoperative T1-weighted sagittal sequence of MR images show well demarcated low signal intensity.

(chicken-wire calcification)가 (Fig. 4).

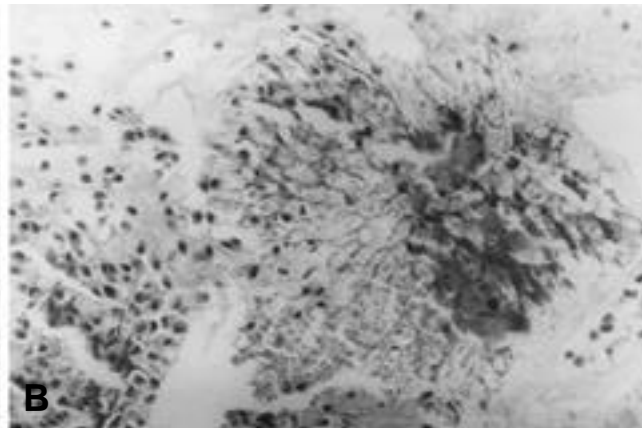
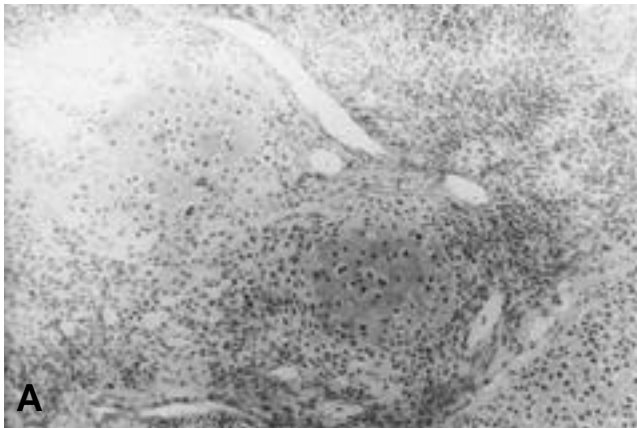


Fig. 4-A. On histologic examination, small cuboidal tumor cells and areas of chondroid differentiation was observed (Hematoxylin and eosin stain, × 100).

B. Deposition of a thin layer of calcium around the tumor cells producing a characteristic chicken-wire appearance (Hematoxylin and eosin stain, × 400).

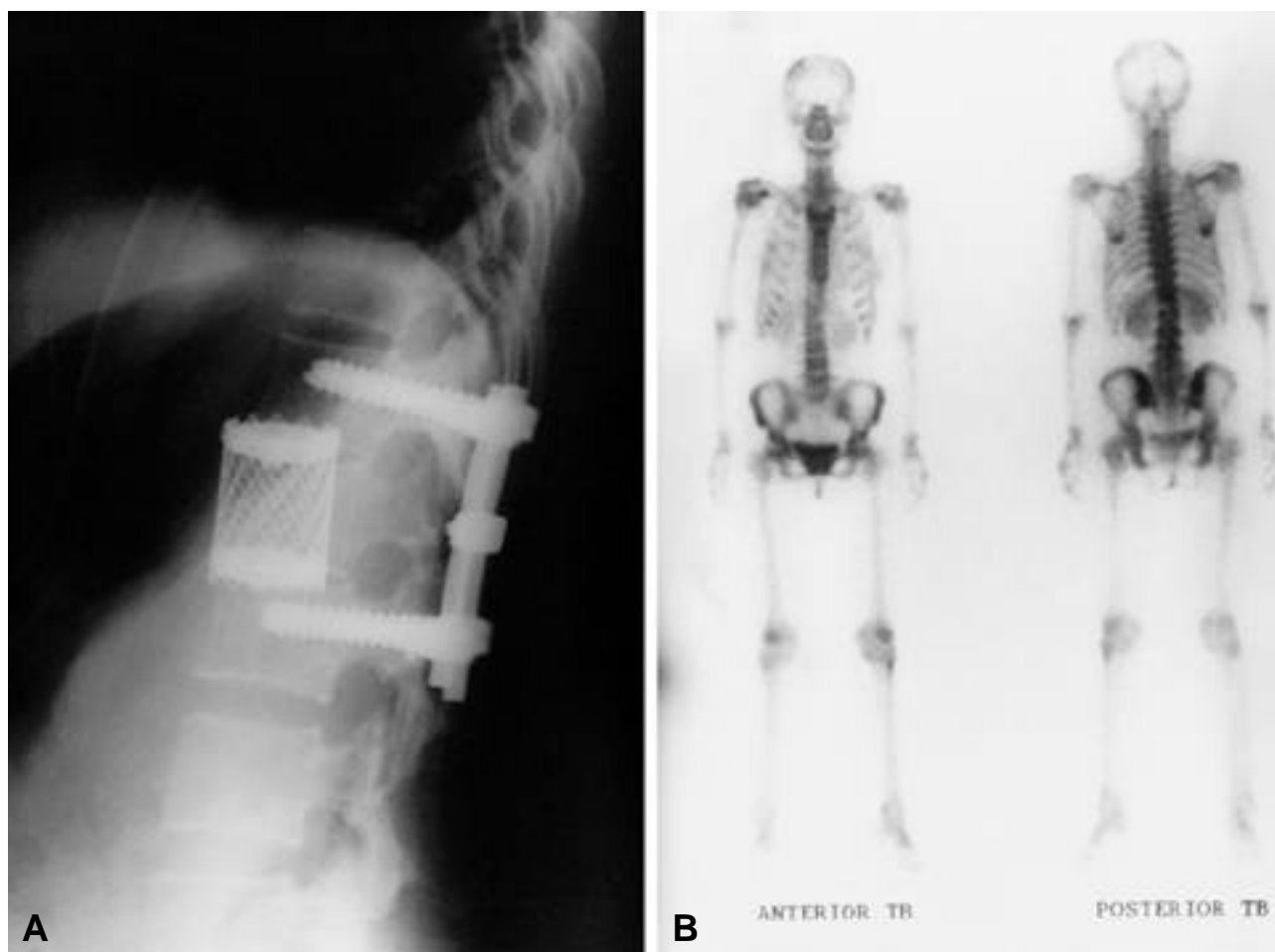


Fig. 5. A,B Postoperative lumbar lateral radiograph and bone scan show no evidence of recurrence.

(Fig. 5A-

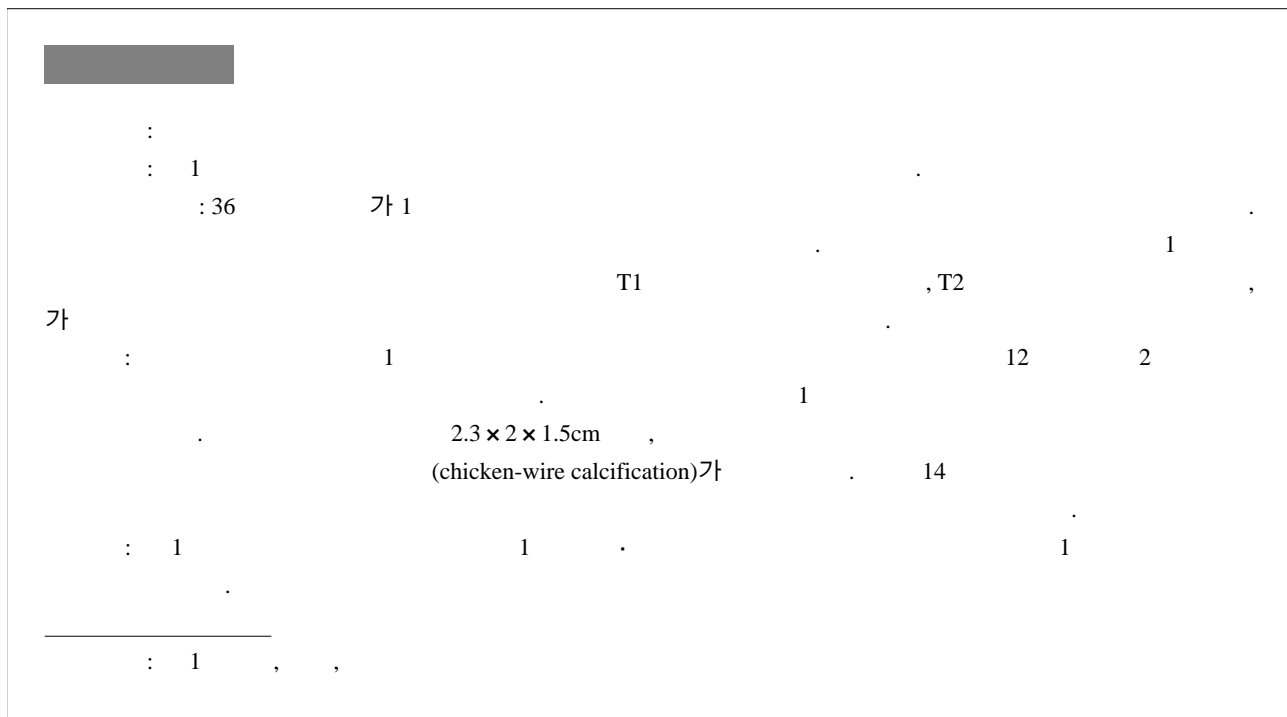
B). 14

3,5,10) .
10 가 3,5) .
Codman ,
3,15) .
Hoeffel 8) 9 7 1 , Janusz
11) 28 3, 4 5,10) Jaffe Lichten-
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7) .
5,10) ,
5,13) 가
4,9) . 0.5 3.0 mm
가 4,15) .
1% 2) 3.4%
5,9,15) .

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⁴⁾ 2.5 3.0 cm , 10 × 7 × 5 cm
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 가 ¹⁵⁾ , 가
 가
⁴⁾ ,
¹⁵⁾ ,
⁹⁾ 30 1
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Tel : 82-32-621-5259, Fax : 82-32-621-5414, E-mail : schsbj@hosp.sch.ac.kr