



(Brown tumor)

(Fig. 3)

가 , 가

(Fig. 4).

(Fig. 5).

1.5 × 1.5 × 3 cm

가

(Fig. 6).

9

(1 - 3),

8

12.8 mg/dl

(4, 5).

1.0 mg/dl

846.4 pg/ml

serum alkaline

phosphatase 가 2338 IU/L

34

가 1

가

(Fig. 7),

가

(MRI)

가

(Fig. 1).

(PTH,

가

가

parathyroid hormone)

가

T2 T1

(Fig. 2).

(CT),

PTH

가

가

D

가

가

PTH

가 가

(1).

PTH

(2) .

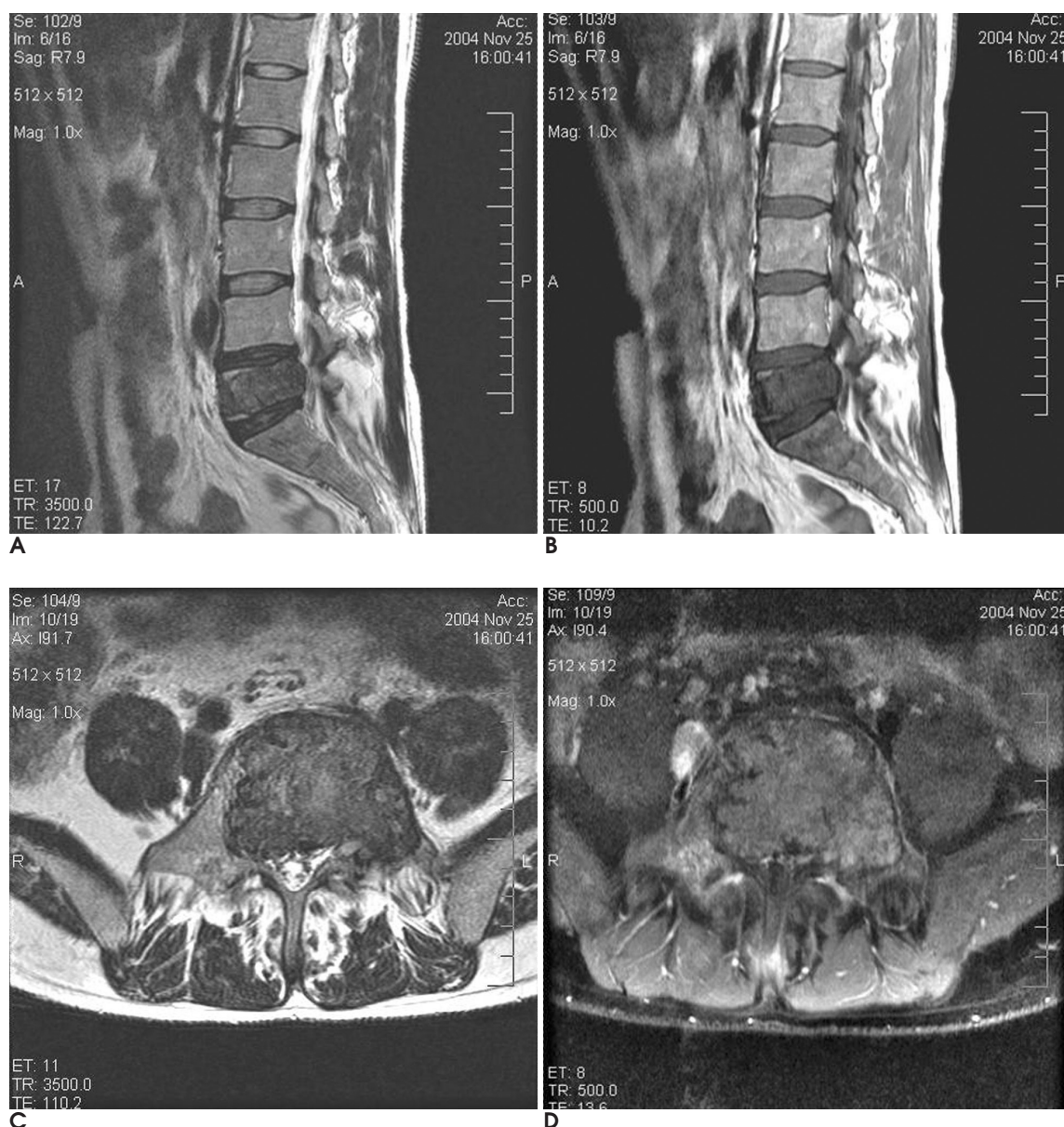


Fig. 1. MRI in 43-year-old man with brown tumor of the spine.

A. Sagittal T2-weighted image shows heterogeneous low signal mass of L5 body.

B. Sagittal T1-weighted image shows low signal mass of L5 body.

C. Axial T2 weighted image shows well margined low signal mass replaced marrow of body and left pedicle with thin dark lobulating rim. The mass extends with encroachment of spinal canal.

D. Axial postcontrast fat-suppressed T1-weighted image shows heterogeneous enhancement of mass.

(6).

. CT

(4).

가

가

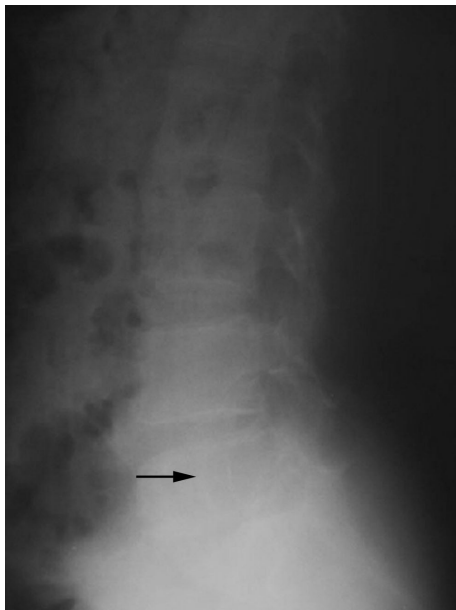


Fig. 2. Lateral view of lumbar spine shows relatively well defined osteolytic lesion in L5 body (arrow).

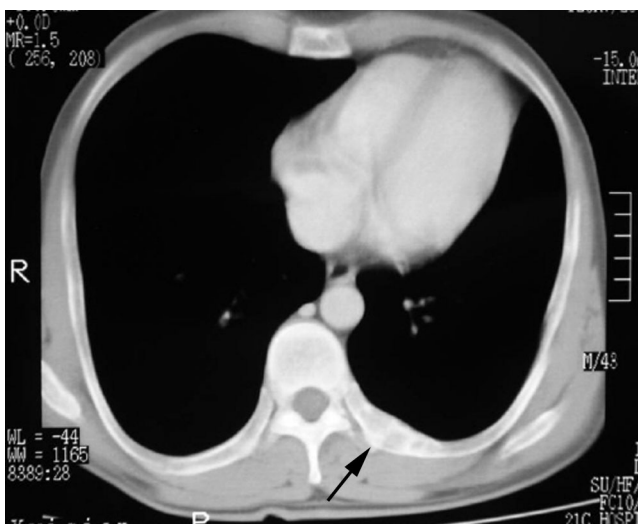


Fig. 3. Chest CT scan shows expansile osteolytic lesion without cortical destruction or periosteal reaction in left 7th rib (arrow).



Fig. 4. Posteroanterior view of both hand shows multiple well defined expansile osteolytic lesions in left 4th proximal phalangeal and right first metacarpal bone and proximal phalanx of second finger (arrows).



Fig. 5. Lateral view of both tibiae shows multiple osteolytic lesions with sclerotic rim in tibiae and fibulae.

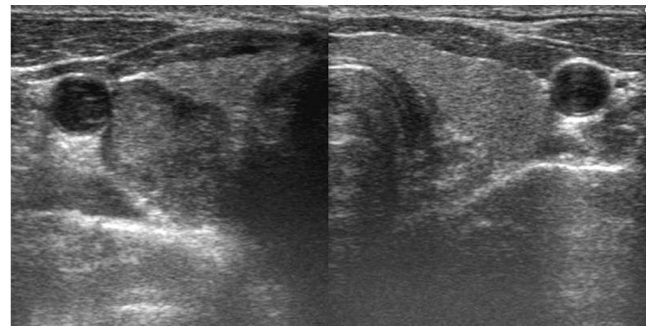


Fig. 6. Ultrasonogram of thyroid gland shows well margined lobulating low echogenic mass in right retrothyroid area.

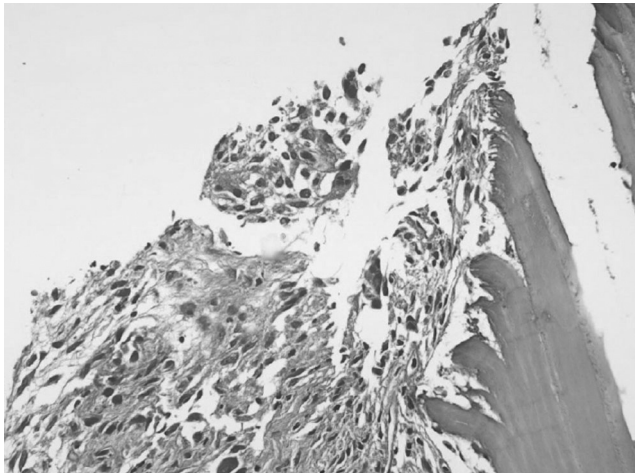


Fig. 7. Photomicrograph reveals solid area of marrow space replaced by proliferation of fibroblasts with collagen fibers and several multinucleated osteoclasts (giant cells). (H and E, $\times 400$)

(7),
가
CT
(8).
T2
가
T2
(9),
가
MRI
63 - 96%
T2
(10).
T1, T2
(remineralization)

(9).
(mechanical
complication) 가
가
(1).
(1).

1. Vandebussche E, Schmider L, Mutschler C, Man M, Jacquot C, Augereau B. Brown tumor of the spine and progressive paraplegia in a hemodialysis patient. *Spine* 2004;29:E251-255
2. Paderni S, Bandiera S, Boriani S. Vertebral localization of a brown tumor: description of a case and review of the literature. *Chir Organi Mov* 2003;88:83-91
3. Masutani K, Katafuchi R, Uenoyama K, Saito S, Fujimi S, Hirakata H. Brown tumor of the thoracic spine in a patient on long-term hemodialysis. *Clin Nephrol* 2001;55:419-423
4. Kashkari S, Kelly TR, Bethem D, Pepe RG. Osteitis fibrosa cystica (brown tumor) of the spine with cord compression: report of a case with needle aspiration biopsy findings. *Diagn Cytopathol* 1990; 6:349-353
5. Yokota N, Kuribayashi T, Nagamine M, Tanaka M, Matsukura S, Wakisaka S. Paraplegia caused by brown tumor in primary hyperparathyroidism. *J Neurosurg* 1989;71:446-448
6. Agarwal G, Mishra SK, Kar DK, Singh AK, Arya V, Gupta SK, et al. Recovery pattern of patients with osteitis fibrosa cystica in primary hyperparathyroidism after successful parathyroidectomy. *Surgery* 2002;132:1075-1085
7. Mourelatus Z, Goldberg H, Sinson G, Quan D, Lavi E. Case of the month: march 1998--48 year old man with back pain and weakness. *Brain Pathol* 1998;8:589-590
8. Kuhlman JE, Fishman EK, Siegelman SS. Computed tomographic features of renal osteodystrophy. *Orthop Rev* 1989;18:1290-1295
9. Mustonen AOT, Kiuru MJ, Stahls A, Bohling T, Kivioja A, Koskinen SK. Radicular lower extremity pain as the first symptom of primary hyperparathyroidism. *Skeletal Radiology* 2004;33:467-472
10. Murphy MD, Nomikos JC, Flemming DJ, Gannon FH, Temple T, Kransdorf MJ. Imaging of giant cell tumor and giant cell reparative granuloma of bone: radiologic-pathologic correlation. *Radiographics* 2001;21:1283-1309

Brown Tumor of The Spine with Compression Fracture: A Case Report¹

Young Woo Choi, M.D., Chul Su Ok, M.D.

¹Se Jong Medical Imaging Center

Brown tumor of bone is a severe form of skeletal complication in patients with hyperparathyroidism. The main sites of involvement are the mandible, sternum, ribs, pelvis and femur. Involvement of the spine is less common. We report here a case of brown tumor of the spine that developed in a patient with right parathyroid adenoma.

Index words : Brown tumor, spine

Address reprint requests to : Young Woo Choi, M.D., Se Jong Medical Imaging Center,
1602-8 Seocho-dong, Seocho-gu, Seoul 137-070 Korea.
Tel. 82-2-2055-1104 Fax. 82-2-2055-1106 E-mail: radcyw@netian.com