

통증 및 근골격재활

발표일시 및 장소 : 10 월 18 일(금) 14:35-14:45 Room A(5F)

OP1-2-3

The characteristics of axial gout among Korean patients with peripheral gouty arthritis

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Introduction

Gout is the most common inflammatory arthritis. It is known that gout can be developed in the axial skeleton. However, axial gout which can be potential cause of axial or radicular pain is still under-recognized to spine physicians. There have been few computed tomography (CT) study to describe the characters of axial gout in Caucasian and African American. Classic CT findings of axial gout are intra-articular and juxta-articular osseous erosions with sclerotic margins and tophaceous deposit shown as juxta-articular soft-tissue masses with an attenuation density greater than the surrounding muscle. Recently, dual-energy CT (DECT) has been used to identify MSU deposits with high sensitivity. It have been accepted that there are racial differences in the incidence of gout, however there have been no reports to describe the characteristics of axial gout in Asian population. The aim of study was to describe axial gouty lesions using CT and clinical characteristics in a Korean population and to report feasibility of using DECT to diagnose axial gout.

Materials and methods

We enrolled 95 Korean patients who visited our spine center from March 2012 to February 2017 and who were previously diagnosed with peripheral gouty arthritis with available CT images of vertebral columns. Seven patients underwent DECT. Axial gout was defined by the presence of erosions or tophi in the vertebral endplate or facet joint. Clinical and laboratory data of these patients were retrieved from medical records.

Results

Fifteen (15.8%) of 95 patients had conventional CT evidence suggestive of axial gout. Of the 15 patients, the lumbar spine was commonly involved (12 patients, 80%). Fifteen patients (17 vertebral lesions) had erosions in vertebral columns and two patients presented with tophi with erosive changes in facet joints. (Figure 1) Of the 7 patients subjected to DECT, six demonstrated monosodium urate deposits with erosive foci (Figure 2). There were no correlations of the presence of axial gout with age, duration of peripheral gouty arthritis, laboratory findings, and the presence of hypertension and end-stage renal disease. However, there was a significant correlation of axial gout with the presence of diabetes. (Table 4)

Conclusion

The prevalence of axial gout in Korean patients with peripheral gouty arthritis and spinal symptoms was 15.8%. The lumbar spine was commonly involved. DECT may be useful as an adjunctive tool in the diagnosis of axial gout.

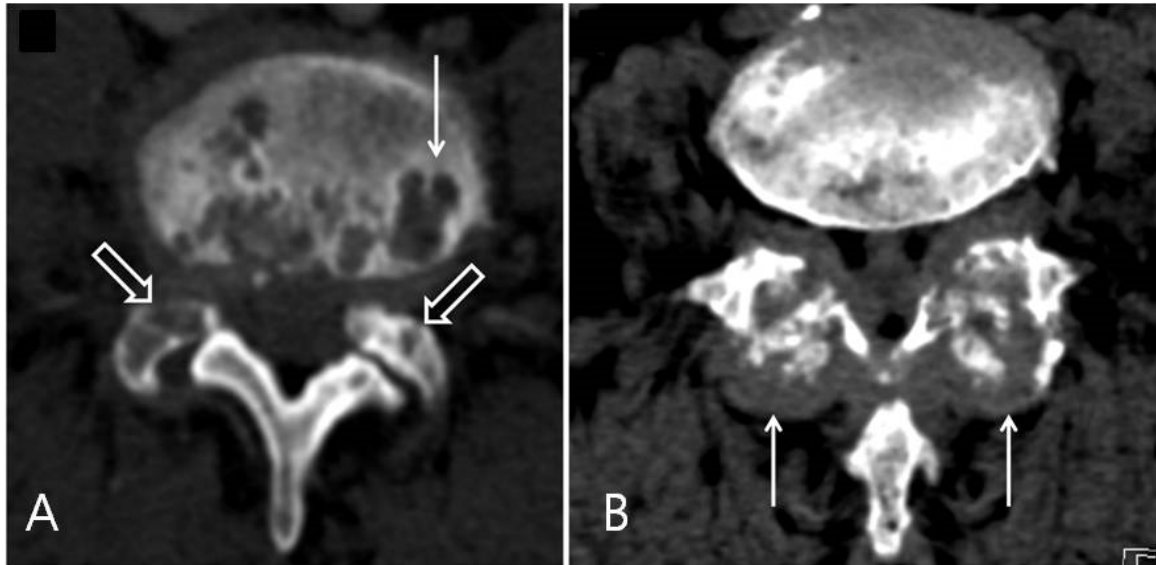


Figure 1. CT evidence suggestive of axial gout. (A) Erosive change with sclerotic margins in vertebral body or facet joints (white hollow arrows). (B) Tophi in facet joints

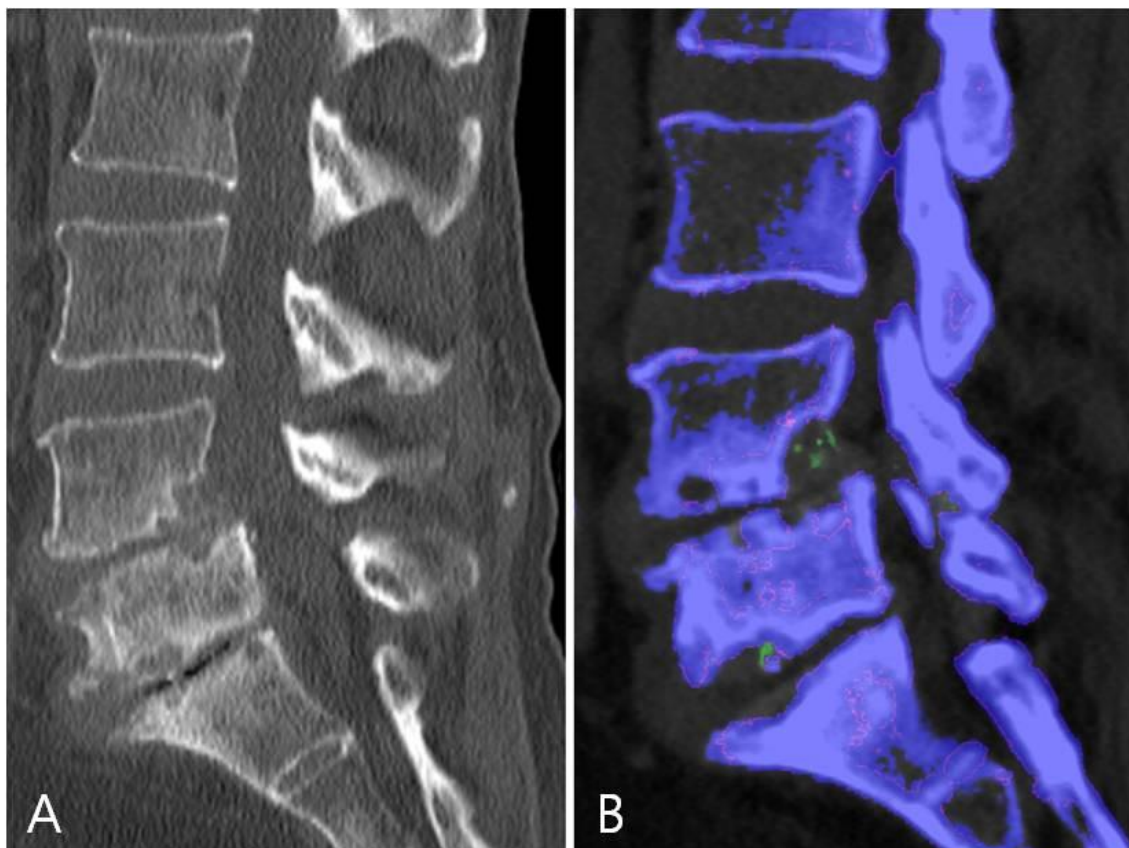


Figure 2. Lumbar spine computed tomography (CT) in axial gout. (A) Erosive changes in L4-5 and L5-S1 endplate on conventional CT. (B) Monosodium urate deposit (green) in the erosive foci of endplate on dual-energy CT.

Table 1. Comparison of factors between axial gout and non-axial gout

Variables	Axial gout (n=15)	Non-axial gout (n=80)	<i>P</i>
Age	67.1±12.1	65.0±13.3	0.545
Duration of disease	6.6±5.0	6.2±6.2	0.570
C-reactive protein, mg/dL	1.4±2.2	1.5±2.6	0.944
Serum uric acid, mg/dL	7.8±2.3	7.7±2.5	0.405
End-stage renal disease, n (%)	5 (31.3)	11 (13.8)	0.284
Diabetes, n (%)	10 (66.7%)	21 (26.3)	0.008
Hypertension, n (%)	10 (66.7%)	54 (67.5%)	0.453