

Letters to the Editor

4. GALBRAITH RM, EDDLESTON AL, PORTMANN B, WILLIAMS R, GOWER PE: Chronic liver disease developing after outbreak of HBSAG-negative hepatitis in haemodialysis unit. *Lancet* 1975; 2: 886-90.
5. THUNG SN, GERBER MA, KLION F, GILBERT H: Massive hepatic necrosis after chemotherapy withdrawal in a hepatitis B virus carrier. *Arch Intern Med* 1985; 145: 1313-4.
6. CSEPREGI A, NEMESANSZKY E, ROJKOVICH B, POOR G: Rheumatoid arthritis and hepatitis B virus: evaluating the pathogenic link. *J Rheumatol* 2001; 28: 474-7.
7. MEHTA A, LU X, BLOCK T et al.: Synovial stimulatory protein fragments copurify with woodchuck hepatitis virus: implications for the etiology of arthritis in chronic hepatitis B virus infection. *Arthritis Rheum* 2001; 44: 486-7.
8. CSEPREGI A, ROJKOVICH B, NEMESANSZKY E et al.: Chronic seropositive polyarthritis associated with hepatitis B virus-induced chronic liver disease: a sequel of virus persistence. *Arthritis Rheum* 2000; 43: 232-3.
9. KHAMAISI M, SHOENFELD Y, ORBACH H: Guillain-Barre syndrome following hepatitis B vaccination. *Clin Exp Rheumatol* 2004; 22: 767-70.
10. GEIER MR, GEIER DA: A case-series of adverse events, positive re-challenge of symptoms, and events in identical twins following hepatitis B vaccination: analysis of the Vaccine Adverse Event Reporting System (VAERS) database and literature review. *Clin Exp Rheumatol* 2004; 22: 749-55.

Tophus in the odontoid process of C2

Sirs,

A cocktail party consultation by a healthy looking colleague, MD, disclosed that a malignant-suspect lytic lesion had been found in the dens of C2. He had had recurrent but self-resolving arthritis attacks of his 1st MTP joints. Twenty years later he developed severe neck pain and a lytic change in the dens of the axis, which was considered to be rheumatoid or metastatic. MRI and CT disclosed a punch-lesion with overhanging edges compatible with a tophus. Due to a risk of pathological atlanto-axial fracture, he was advised against contact sports, to purchase a neck support to his car and to use a soft cervical collar when necessary.

Gout is characterized by hyperuricemia leading at the age of 30-40 years to recurrent acute arthritis attacks caused by intra-articular precipitation of urate to insoluble needle-like strongly birefringent crystals. They evoke a vigorous host response dominated by accumulation, activation and rupture from within of neutrophils. Painful involvement of the 1st MTP joint, podagra, is very typical. In untreated patients arthritis becomes chronic after 10-20 years and tophi develop in soft tissues and as punch-like defects in bone. Gout is common in highly educated professionals. We describe a colleague, who in a cocktail party told about an erosion in the dens of his second

cervical vertebra, which had been suspected to represent a malignant change.

This 69-year-old colleague had a history of mild hypertension and hyperlipidemia. Diuretics were not used. He had a long history of recurrent acute episodes of extremely painful, but self-limited attacks of his 1st MTP joints. Serum uric acid concentrations had been 0.45–0.55 mol/l (ref. 0.16–0.45 mmol/l in men). Attacks had been treated with indomethacin. Allopurinol caused skin eruptions so he took probenecid during symptomatic periods “on demand” with good results. At the time for the visit he had neck pain and torticollis to left without radicular symptoms or paresthesiae.

X-ray, CT and MRI findings were typical to a tophus (Fig. 1) (1, 2). A malignant metastatic change and rheumatoid arthritis were excluded clinically and by the test of time. He now uses probenecid regularly. The odontoid lesions have not changed and the patient is in good general health over five years afterwards.

The low temperature of the 1st MTP joint favours precipitation of soluble urate from supersaturated solutions (3). Nidus formation, perhaps as a result of microtrauma and osteoarthritis, is important for the initiation of the attack. Indeed, the 1st MTP joint is one of the predilection sites for osteoarthritis, the “poor man’s gout”. In Finland real gout occurs in the elbow of fishermen (“fisherman’s gout”), who during extremely cold winter times strain their elbow joint when drilling holes to ice for bait fishing. A typical patient warms himself, not with Italian wines, but with strong spirits of good domestic brand. Baltic herring, small whitefish and other similar rich sources of urate are used for meals (4).

We believe, although needle aspiration and polarized light microscopic examinations had not been done, that there is no other disease with this clinical course able to explain symptoms of our patient. We found only three previous reports of tophaceous involvement of the dens (5-8). Tophi in the

lumbar (9) and cervical spine (10) in the absence of peripheral tophi have been earlier described but our patient is the first reported case of tophaceous involvement of the dens without peripheral tophi.

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References

1. MARTEL W: The overhanging margin of bone. A roentgenologic manifestation of gout. *Radiology* 1968; 91: 755.
2. YU JS, CHUNG C, RECHT M, DAILIANA T, JURDI R: MR imaging of tophaceous gout. *AJR* 1997; 168: 523-7.
3. KELLEY WN, HARRIS ED JR, RUDDY S, SLEDGE CB: Gout and related disorders of purine metabolism. In KELLEY WN (Ed.): *Textbook of Rheumatology*. 5th ed. Philadelphia, Saunders, 1997; 1329-30.
4. ISOMÄKI H, VON ESSEN R: Kihti-yleistyvä niveltauti. *Duodecim* 1977; 93: 1090-8.
5. KERSLEY GD, MANDEL L, JEFFREY MR: An unusual case with softening and subluxation of the first cervical vertebra and splenomegaly. *Ann Rheum Dis* 1950; 9: 282-303.
6. VINSTEIN AL, COCKERILL EM: Involvement of the spine in gout. A case report. *Radiology* 1972; 103: 311-2.
7. JACOBS SR, EDEIKEN J, RUBIN B, DEHORATIUS RJ: Medically reversible quadriplegia in tophaceous gout. *Arch Phys Med Rehabil* 1985; 66: 188-90.
8. RESNICK D, NIWAYAMA G: Gouty arthritis. In: RESNICK D (Ed.): *Diagnosis of Bone and Joint Disorders*. 3rd ed. Philadelphia, Saunders, 1995; 1511-55.
9. VARGA J, GIAMPAOLO C, GOLDENBERG D: Tophaceous gout of the spine in a patient with no peripheral tophi: case report and review of the literature. *Arthritis Rheum* 1985; 28: 1312-5.
10. VAN DE LAAR MA, VAN SOESBERGEN RM, MATRICALI B: Tophaceous gout of the cervical spine without peripheral tophi. *Arthritis Rheum* 1987; 30: 237-8.

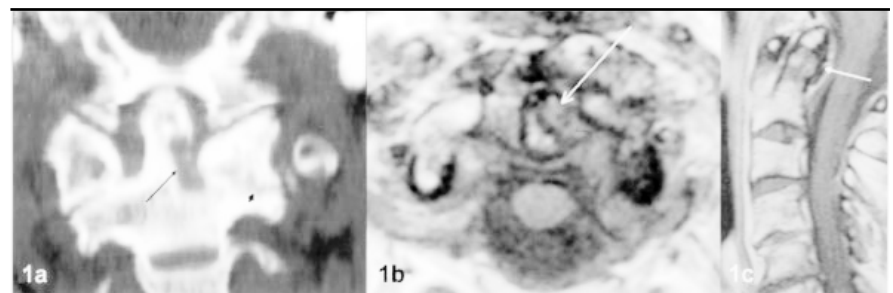


Fig. 1. CT (a) disclosed a punched-out lesion (long thin arrow) of the dens of C2 with an overhanging edge of the cortex at the base of it, surrounded by a thin sclerotic wall. There was osteoarthritis (small thick arrow) in the left atlanto-axial joint. MRI (b, c) disclosed a periodontoid soft-tissue mass (arrows) with an associated sharply delineated erosion of the dens with tophus characteristics.