

# Chronic hematic cyst of the temporomandibular joint

*Kaan Orhan, DDS, PhD, Hideyoshi Nishiyama, DDS, PhD, Kishino Mitsunobu, DDS, PhD, Souhei Furukawa, DDS, PhD, Cagri Delilbasi, DDS, PhD.*

---

## ABSTRACT

Hematic cyst refers to accumulation of blood or blood breakdown products in a non epithelium-lined fibrous tissue capsule. Hepatic cyst is a term often used for deeply placed, incompletely resorbed hematoma (hemorrhagic cyst), which may remain unchanged and unidentified for long periods of time. Trauma is the major causative factor, although it is often vague or totally uncalled by the patient. Chronic hematic cysts are uncommon lesions those can present diagnostic challenge. In this article we report a first case of a chronic hematic cyst of the temporomandibular joint (TMJ).

**Saudi Med J 2005; Vol. 26 (8): 1283-1285**

---

Most of the hematomas, like other localized accumulation of blood, disappear within days. On the other hand, 'hematic cyst' is a term often used to describe a deeply placed incompletely resorbed hematoma (hemorrhagic cyst), which may remain unchanged and undiagnosed for long periods of time.<sup>1</sup> The term "hematic cyst", defined by Henderson,<sup>2</sup> refers to a cystic accumulation of hematogenous debris surrounded by a fibrous tissue, and lacking of an epithelial lining or covering. The hematic cyst may develop from a complication of head trauma or from prolonged retention of a foreign body. It may arise spontaneously, although some have been reported to occur between 10 days to 20 years after trauma.<sup>3-5</sup>

Here we reported, to our knowledge, the first case of a chronic hematic cyst of the temporomandibular joint (TMJ) secondary to a trauma.

**Case Report.** A 59-year-old Japanese man referred to Osaka University, Dental Hospital

suffering from masticatory dysfunction. He had limited mouth opening and right TMJ pain aggravated on function. He had a history of blunt trauma to right TMJ area about one year previously, which he could not recall clearly. He had no systemic disease. The head and neck examination revealed no evidence of adenopathy, paresthesia or motor nerve deficiency. Intraoral examination was also normal. Maximum opening range was 30 mm, and there was no sound on both sides of TMJ, but still he had pain on right TMJ. The surface of the skin was normal in appearance.

The magnetic resonance imaging (MRI) showed a mass surrounded by a membrane that was located in the lateral part of the joint, and we detected a relationship between condyle and the mass, but there was no relationship between the mass and the parotid gland. It appeared as high signal intensity on both T1 and T2 weighted images. A MRI showed erosion on the mandibular condyle in addition to a signal void area at the center of the lesion (**Figure 1**).

---

From the Department of Oral Diagnosis and Radiology (Orhan), Faculty of Dentistry, Ankara University, Ankara, Department of Oral and Maxillofacial Surgery (Delilbasi), Faculty of Dentistry, Yeditepe University, Istanbul, Turkey, Department of Oral Maxillofacial Radiology (Nishiyama, Furukawa) and the Department of Oral Pathology (Mitsunobu) Graduate School of Dentistry, Osaka University, Osaka, Japan.

Received 19 February 2005. Accepted for publication in final form 28th May 2005.

Address correspondence and reprint request to: Dr. Cagri Delilbasi, Faculty of Dentistry, Yeditepe University Bagdat Caddesi No. 238, Goztepe 34728, Istanbul, Turkey. Tel. +90 (542) 5837240. Fax. +90 (216) 3636211. E-mail: cdelilbasi@yahoo.com

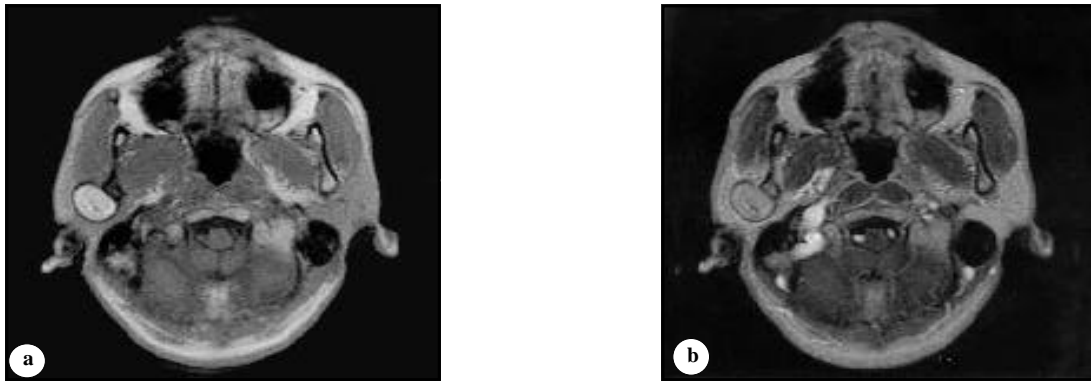


Figure 1 - Magnetic resonance imaging demonstrating a) T1 and b) T2 with high signal intensity mass in the lateral part of the joint.

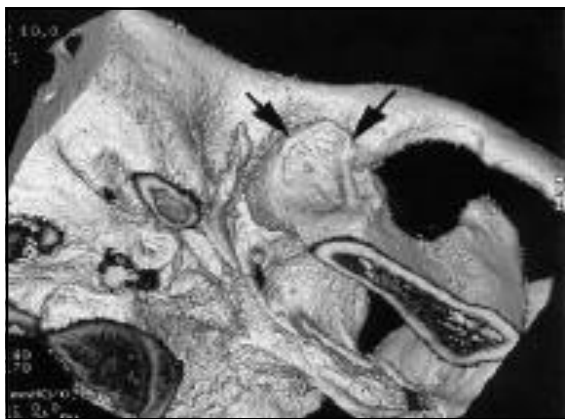


Figure 2 - Note deformity and erosion of the lateral condylar head (black arrows).



Figure 3 - The histopathologic view of the mass.

On CT images with 3D reconstruction, erosion of lateral part of condylar head was clearly detected. (Figure 2).

The mass was removed under general anesthesia via preauricular approach. We observed a cystic lesion approximately 1 cm in diameter. Microscopically, the lesion consisted of a cyst containing blood. No epithelial or endothelial cells could be seen lining the cyst. A dens fibrous wall was observed around the lesion. (Figure 3). The symptoms subsided gradually and one-year follow-up was uneventful.

**DISCUSSION.** Chronic hematic cyst is a cystic lesion that contains blood but has no epithelial lining. The pathogenesis of hematic cyst is unclear, but it is generally believed to be due to blunt trauma, which is vague or totally unrecalled by the patient causing hemorrhage inside the joint, which is not completely absorbed. The old blood, and blood breakdown products then elicit a granulomatous reaction and encapsulation by fibrous tissue.<sup>2</sup> Other causative factors for this lesion are; blood dyscrasia, vascular disease, spontaneous hemorrhage, and other systemic diseases such as scurvy, rickets, and myelogenous leukemia.<sup>6-8</sup> Most of the patients are male, probably due to more frequent incidence of trauma. In this patient the lesion developed probably due to trauma, which the patient could not remember clearly, because there was no other systemic or local causative factor.

Differential diagnosis of hematic cyst includes dermoid cyst, hemorrhagic extravasations within a dermoid or epidermoid teratoma, cholesteatoma, giant cell reparative granuloma, lipid granuloma, and eosinophilic granuloma.<sup>1</sup>

Differential diagnosis for this case can also be made with the cystic lesions of the TMJ such as, ganglion cyst and synovial cyst. These lesions

commonly occur on the extensor surface of the wrist, knee, and ankle joints.

We recommend surgical treatment since the lesion may cause pain, and dysfunction as seen in our case.

## References

1. Som PM, Curtin HD. Head and Neck Imaging. 3rd ed. St. Louis Missouri: Mosby; 1996; 332: 1124-1125.
2. Henderson JW. Hematic cyst in orbital tumors. Philadelphia: Saunders; 1973; 10.
3. Goldberg S, Sassani JW, Parnes ER. Traumatic intraconal hematic cyst of the orbit. *Arch Ophatmol* 1992; 110: 378-380.
4. Shapiro A, Tso M, Putterman AM, Goldberg MF. A clinicopathologic study of hematic cysts of the orbit. *Am J Ophthalmol* 1986; 102: 237-241.
5. Mafee M, Putterman A, Valvassori GE, Campos M, Capek V. Orbital space-occupying lesions: role of computed tomography and magnetic resonance imaging. An analysis of 145 cases. *Radiol Clin of North Am* 1987; 25: 529-559.
6. Madaree A, Morris WM, Ramdial PK, McGibbon IC, Blignault P. Chronic orbital hematic cysts: a case for craniofacial correction. *Plast Reconstr Surg* 1997; 100: 1803-1808.
7. Kersten RC, Kersten JL, Bloom HR, Kulwin DR. Chronic hematic cyst of the orbit. Role of magnetic resonance imaging in diagnosis. *Ophthalmology* 1988; 95: 1549-1552.
8. Milne H 3rd, Leone CR, Kincaid MC, Brennan MW. Chronic hematic cyst of the orbit. *Ophthalmology* 1987; 94: 271-277.