Case Report

Chronic osteomyelitis: 20 years after mandible fracture

Ertas U, Tozoglu S, Gursan N. Chronic osteomyelitis: 20 years after mandible fracture. Dent Traumatol 2004; 20: 106–108. © Blackwell Munksgaard, 2004.

Abstract — Chronic osteomyelitis is a persistent abscess of the bone that is characterized by the usual complex of inflammatory processes, including necrosis of mineralized and marrow tissues, suppuration, resorption, sclerosis, and hyperplasia. The purpose of this paper is to report a case of chronic osteomyelitis seen 20 years after mandible fracture.

Umit Ertas¹, Sinan Tozoglu¹, Nesrin Gursan²

¹Atatürk University Dentistry Faculty, Department of Oral and Maxillofacial Surgery, ²Atatürk University Medicine Faculty, Department of Pathology, Erzurum, Turkey

Key words: chronic osteomyelitis; mandible fracture

Umit Ertas, Ataturk University, Dis Hekimligi Fakultesi, Cerrahi Anabilim Dali, Erzurum 25240, Turkey Tel.: +90 442 231 1799 Fax: +90 442 236 0945 e-mail: uertas1970@yahoo.com Accepted 4 September, 2003

ago with a 5-year history of pain, swelling and intermittent purulent discharge.

Case report

In May 2001, a 72-year-old man was referred to the Department of Oral and Maxillofacial Surgery because of a recurrent swelling and pain in the right mandible that had existed for 5 years. The patient had a history of trauma 25 years ago, and his right corpus mandible was fractured at that time. He had the fracture treated in another clinic. After 20 years, pain, swelling, and purulent discharge started in that area. The patient mentioned that his extraoral sinus had intermittently developed and drained a small amount of pus and then closed in the fractured area. The symptoms then had moderated, and the patient had become much more comfortable. Although he obtained little relief from potent analgesics and antibiotics recommended from other clinics, over the following 5 years his symptoms remained intermittently severe.

When the patient was referred to our clinic, extraoral examination showed that there was a purulent discharge in the inferior border of the right mandible.

Chronic osteomyelitis is a persistent abscess of the bone that is characterized by the usual complex of inflammatory processes, including necrosis of mineralized and marrow tissues, suppuration, resorption, sclerosis, and hyperplasia (1, 2). It may be one of the sequelae of acute osteomyelitis (either untreated or inadequately treated), or it may represent a long-term, low-grade inflammatory reaction that never went through a significant or clinically noticeable acute phase (3). In the case of chronic suppurative osteomyelitis, the infection is localized but is persistent because the infected necrotic area, that is ischemic bone, is effectively isolated from the host's defensive reactions (1, 2). If the amount of ischemic bone was substantial, it would remain as a sequestrum. Local tenderness and swelling develop over the bone in the area of the abscess. Intraoral or extraoral sinuses intermittently develop and drain a small amount of pus and then close. The symptoms then moderate, and the patient becomes much more comfortable. Chronic lesion may persist for a variable period up to many years with intermittent exacerbation (1-3). Treatment of chronic osteomyelitis is a radical resection of the infected bone followed by efforts at reconstruction (2,3). We describe a 72-year-old man having mandible fracture 25 years

Chronic osteomyelitis



Fig. 1. Panoramic radiograph showing a lesion in the inferior border of the right mandible.



Fig. 4. Histological appearance of osteomyelitis with reactive sclerosis. Bone trabecula shows ragged borders. Note the fibrosis of the marrow space accompanied by chronic by inflammatory cells.



Fig. 2. CT scan showing a lesion in the inferior border of the right mandible.



Fig. 3. Arrow points to lesion exposed in the right mandible.

The swelling and pain were mild. There were no symptoms intraorally. The panoramic radiograph and CT showed that there was a lesion in the inferior border of the right mandible (Figs. 1 and 2). Bacterial culture was positive for *Staphylococcus aureus*, and penicillin was given.

On May 28, 2002, the lesion was removed surgically under general anesthesia (Fig. 3). Microscopically, chronic inflammatory cells were seen in a fibrous marrow(Fig. 4). The diagnosis of chronic osteomyelitis was made. Postoperatively, the patient remained free of symptoms.

Discussion

Although chronic osteomyelitis is no longer often seen in developed countries, it is still relatively common as a sequelae from open fractures (4). Osteomyelitis is initiated from a contiguous focus of infection or by hematogenous spread. Hematogenous osteomyelitis is infrequent in the jaws, the disease being caused primarily by odontogenic infections (1-3, 5). Trauma, especially compound fractures, is the second leading cause (1-6). In our case, although the patient had a fracture 25 years ago and there were no symptoms for the following 20 years, osteomyelitis' symptoms, such as swelling, pain, and purulent discharge, were seen 20 years after the trauma. We think that the sequestrum, which remained after the fracture, might have caused infection in the fractured area that had 25-year history.

Chronic osteomyelitis of the jaws usually requires both medical and surgical treatments, although occasionally antibiotic therapy alone is successful (2–4, 6). The patient discussed in this article initially received treatment consisting of the conventional

Ertas et al.

therapeutic methods such as antibiotics and analgesics after the symptoms were first seen during the last 5 years. It showed no lasting results. During this period, pain, swelling, and purulent discharge recurred several times and lasted for different intervals of time but without a change in the character of the complaints. When the patient was referred to our clinic, we applied sequestrectomy besides culture and sensitivity studies. According to Topazian and Goldberg, if the drainage persists despite appropriate antibiotic treatment as evidenced by repeated cultures and sensitivity testing, sequestrectomy, decortication, resection, and reconstruction must be considered as the principles of treatment (2).

This article shows that a fracture may cause chronic osteomyelitis because of sequestrum in the fracture area in the mandible even after a very long period of time. Sequestrectomy as an adjunct to medical treatment should be considered as a treatment for such cases.

References

- Goaz PW, White SC. Oral radiology. St Louis: The C.V. Mosby Co.; 1987. p. 471–83.
- Topazian RG, Goldberg MH. Oral and maxillofacial infections, 3rd edn. Philadelphia: W.B. Saunders Company; 1994. p. 251.
- RegeziJA, SciubbaJJ. Oral pathology, 3rd edn. Philadelphia: W.B. Saunders Company; 1999. p. 386–96.
- Taher AAY. Osteomyelitis of the mandible in Tehran, Iran. Oral Surg Oral Med Oral Pathol 1993;76:28-31.
- Koorbusc GF, Fotos P, Goll KT. Retrospective assessment of osteomyelitis. Oral Surg Oral Med Oral Pathol 1992;74: 149-54.
- Hudson JW. Osteomyelitis of the jaws. J Oral Maxillofac Surg 1993;51:1294–301.

This document is a scanned copy of a printed document. No warranty is given about the accuracy of the copy. Users should refer to the original published version of the material.