Primary chronic osteomyelitis in the mandible: a conservative approach

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SUMMARY
Primary chronic osteomyelitis of the jaw is an uncommon non-suppurative, chronic inflammatory disease of unknown origin. It can manifest as early or adult onset and is characterised by lack of pus formation, fistula or bony sequestra formation. A 28-year-old woman presented with swelling on the left side of her mandible. On the basis of clinical, radiological and histological findings, primary chronic osteomyelitis was diagnosed. Surgical decortication and contouring of the affected bone was performed and no signs of recurrence were seen at 2-year follow-up. Hence we emphasise the importance of decortication over peripheral or segmental resection of the jaw for the treatment of primary chronic osteomyelitis since this procedure is less aggressive and more functionally and aesthetically acceptable.

BACKGROUND
Osteomyelitis is defined as an inflammatory condition of the bone that begins as an infection of the medullary cavity, rapidly spreads to the Haversian systems, and eventually involves the periosteum of the medullary cavity, rapidly spreads to the Haversian systems, and eventually involves the periosteum of the bone that begins as an infection of the bone that begins as an infection of the bone that begins as an infection of the bone. Although surgical treatment alone cannot guarantee an absolute cure, decortication with removal of necrotic tissue in the early stages is proposed and has a good prognosis.

CASE PRESENTATION
A 28-year-old woman reported to the department with complaints of recurring episodes of swelling in the left lower jaw (figure 1), intermittent mild pain in the entire left side and parasthesia of the left lower lip for 1 month. She was apparently asymptomatic 3 years previously when she noticed a small diffuse swelling on the left side of her lower jaw. The swelling had recurred intermittently over the last 3 years. She had no history of trauma, infection or systemic disease. She had undergone drug therapy many times for her complaint but with little benefit. On clinical examination, a firm, hard, diffuse and mildly tender swelling extending from angle of the mouth to the angle of the mandible on the left side was noticed. On intra-oral examination, the buccal cortical plate was increased in size from the left mandibular canine to the second molar region and the buccal vestibule was obliterated. There were no signs of infection, periostitis or caries.

INVESTIGATIONS
Cone beam CT (CBCT) scans of the region revealed a mixed pattern with partial loss of normal bone structure along with sclerosis and subperiosteal bone formation suggestive of chronic osteomyelitis. A large expansion of the mandibular bone was performed and no signs of recurrence were seen at 2-year follow-up. Hence we emphasise the importance of decortication over peripheral or segmental resection of the jaw for the treatment of primary chronic osteomyelitis since this procedure is less aggressive and more functionally and aesthetically acceptable.

We treated PCO of the mandible by decortication of the bone. Although surgical treatment alone cannot guarantee an absolute cure, decortication with removal of necrotic tissue in the early stages is proposed and has a good prognosis.

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body and periosteal apposition was evident on CBCT (figures 2 and 3).

Blood investigation revealed a raised erythrocyte sedimentation rate. Incisional biopsy was carried out and histopathological finding revealed various stages of chronic inflammation, lymphocytosis and some areas of subperiosteal bone formation.

DIFFERENTIAL DIAGNOSIS
PCO was diagnosed on the basis of mandibular involvement, the hard swelling, the absence of pus and extra- or intra-oral fistula, the insidious course and the full complement of teeth without any caries or pathology, or any other intra-oral foci of infection. Benign tumours such as ossifying and non-ossifying fibroma, and fibrous dysplasia were ruled out by clinical, radiological and histopathological evaluation.

TREATMENT
Surgical management was planned and bone decortication was carried out from the left mandibular premolar to the second molar area with extraction of the first and second molars due to poor bone support in the region (figure 4). The patient was prescribed antibiotics and attended regular follow-up visits.

OUTCOME AND FOLLOW-UP
The patient was asymptomatic 2 years after surgery and a CBCT scan (figure 5) revealed mild areas of radiolucency and reparative bone formation below the premolar area and comparative normal dense bone in the molar region, suggestive of incomplete bone healing although clinically there was no sign of disease.
of life. In our case, intra-oral decortication was carried out, antibiotics were prescribed and the patient was called for routine follow-up examinations. The patient was completely relieved of symptoms and had no complaint after 2 years of follow-up. We recommend that surgical decortication and empirical antibiotic therapy should be considered as the treatment of choice as compared to antibiotics alone or peripheral/segmental osteotomy. Patients should be followed up as recurrence is common.

Learning points

▸ Surgical decortication and empirical antibiotic therapy should be considered as the treatment of choice for primary chronic osteomyelitis since this is less aggressive and more functionally and aesthetically acceptable.
▸ Following decortications, implants can be used for the rehabilitation of patients.
▸ Patients should be followed up as recurrence is common.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCES