ABSTRACT
Ossifying fibroma, also the cement ossifying fibroma radiographically, represents a well-demarcated mixed radiolucency/radio-opacity with smooth and often sclerotic borders. These lesions are usually solitary and most commonly seen in the mandible; cases in the maxilla have also reported. Histologically, they contain a relatively avascular cellular fibrous stroma with reticular bone trabeculae and cementum-like spherules. We present a case report of an 11-year-old boy with a 2-month history of an asymptomatic swelling seen on the left side of the angle of the mandible. An initial diagnosis of ossifying fibroma was made by an incisional biopsy, and considering the age as a factor surgical resection of the tumor was done under general anesthesia following closure by a two-layer suturing under proper antibiotic and analgesic coverage. The patient has been on regular follow-ups with no adverse effects and satisfactory healing.

Keywords: Biopsy, fibroma, mandible, nonodontogenic, trabeculae

INTRODUCTION
Fibro-osseous lesion refers to a collection of nonneoplastic intraosseous lesions that replace normal bone and consists of a cellular fibrous connective tissue within which nonfunctional osseous structure forms. These lesions are usually solitary and most commonly seen in the mandible, cases in the maxilla have also reported. In the second edition of the World Health Organization (WHO) classification in 1992, the cemental lesions were included in the “neoplasm and other tumors related to bone group” leaving behind cementoblastoma, a true neoplasm of dental cemental structure. “WHO histological classification of odontogenic tumors” recognized these cemental lesions as the group of cement-osseous dysplasia, encompassing florid cement-osseous dysplasia which occurs with periapical cemental dysplasia and other cemento-osseous dysplasia.

Osteogenic neoplasms as follows:
- Cemento-ossifying fibroma
- Juvenile ossifying fibroma (JOF)
  - Trabecular JOF
  - Psammomatoid JOF.

Ossifying fibroma being the most common true neoplasm is seen mostly in the late third and early fourth decade with an occurrence at a later age than fibrous dysplasia. It seems to be confined to the jaws and craniofacial complex, mainly cases have reported in the long bones too. There is, again, a female predominance but no racial predominance, and growth rates are variable. Since it is felt to be a neoplasm, the treatment is surgical; in fact, the lesions often shell out easily at surgery; although there is recurrence, the rate of which has variously been reported from 1% to 63%. Histologically, they contain a relatively avascular cellular fibrous stroma with reticular bone trabeculae and cementum-like spherules.

Juvenile aggressive ossifying fibroma was first described in 1952 as a variant of ossifying fibroma. The lesions classically...
occur in younger children and adolescents and present with an aggressive behavior. The WHO defines juvenile aggressive ossifying fibroma as "an actively growing lesion mainly affecting individuals below the age of 15 years, which is composed of a cell-rich fibrous tissue containing bands of cellular osteoid without osteoblastic rimming together with trabeculae of more typical woven bone. Usually no fibrous capsule can be demonstrated, but the lesion is well demarcated from the surrounding bone."[4] Two variants have been described: trabecular and psammomatous. The trabecular variant usually occurs in childhood, with a slight maxillary predominance, and may contain clustered multinuclear giant cells. The psammomatous variant can occur in adults as well as adolescents and often affects the orbit and paranasal tissues; frequently, it contains a whorled pattern of closely packed spherical ossicles and a myxoid component with aneurysmal bone cyst-like areas. Although felt to be more aggressive than the more common ossifying fibroma that is found at a later age, this condition is not considered to necessitate truly aggressive surgery; conservative excision is still the recommended treatment although lesions involving the craniofacial structures may require more extensive surgery. Recurrence rates of between 20% and 50% have been reported, and recurrences may be more common in younger patients.[5]

**CASE REPORT**

An 11-year-old male pediatric patient reported to the Department of Oral and Maxillofacial Surgery, Yenepoya Dental College, Mangalore, Karnataka, with a chief complaint of swelling over the left side of his face. The child started noticing the swelling 2 months back which was asymptomatic and with a slow progression rate and has attained the present size [Figure 1]. On extraoral examination, a well-defined swelling is noted on the left angle of the mandible measuring 2 cm × 2 cm in diameter with a bony hard consistency which is superiorly extending 1 cm below the alar tragal line to 0.5 cm below the lower border of the mandible and anteroposteriorly 3 cm away from the left commissure of the lip to the angle of the mandible [Figure 2]. Intraorally, no occlusal deformities were noted and the mucosa appears normal [Figure 3]. The skin over the surface and surrounding area appears normal. Radiographical examination shows ill-defined radiolucent areas noted at the left angle of the mandible with discontinuity in the lower border [Figure 4]. After the clinical, radiological (cone beam computed tomography), and histological analysis, it was diagnosed as ossifying fibroma.

Under general anesthesia, an incision was placed 2 cm below the angle of the mandible. The incision was carried through the skin and subcutaneous tissues; dissection was carried out superiority by preserving the marginal mandibular nerve and thereby exposing the tumor [Figure 5]. Considering the age as a factor surgical excision of the tumor was done [Figure 6], and chemical cauterization using Carnoy’s solution was done.
Hemostasis was achieved, and a two-layer closure was done by a muscle closure and subcuticular suturing using 3–0 vicryl and 4–0 ethilon. Sutures were removed after 10 days, and the patient has been on regular follow-ups ever since.

DISCUSSION

JOF is a relatively rare fibro-osseous lesion of the jaws characterized by the early age of onset, i.e., under 15 years of age, the location of tumor, the radiological appearance, and the tendency to recur. Noffke after 8-year follow-up of a JOF in the left mandible of a 4-year-old boy, demonstrated initial lack of radiological evidence of demarcation and subsequent eccentric enlargement, selective tooth displacement, and a multilocular appearance in areas of active growth. In addition, an aneurysmal bone cyst and a decrease in the bone content were presented in the excision specimen. Furthermore, osteoblastoma, osteosarcoma, and odontogenic tumors should be considered in the differential diagnosis of JOF.

Ong and Siar presented JOF as a progressively growing lesion that can attain an enormous size with resultant deformity if left untreated. They presented a case of large cemento-ossifying fibroma involving the left mandible in a 15-year-old male patient. The long-lasting history of untreated JOF resulted to spontaneous fracture of mandible. Furthermore, if JOF do not have adequate surgical treatment, it may have high rate of recurrence.

CONCLUSION

Juvenile aggressive ossifying fibroma is considered as one of the rare fibro-osseous lesions which are seen in young children with equal sex predilection. Due to its aggressiveness nature and the incidence of recurrence,
early diagnosis of the tumor should be considered for a conservative management at the appropriate time with a proper follow-up.

Declaration of patient consent
The authors certify that they have obtained all appropriate patient consent forms. In the form, the legal guardian has given his consent for images and other clinical information to be reported in the journal. The guardian understands that names and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

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Conflicts of interest
There are no conflicts of interest.

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