Recurrent Chondroblast Osteosarcoma of Maxilla

A Case report

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Abstract

Osteosarcoma (OS) is the most primary tumor in the jaw, it is rare in maxillofacial region rather than long bones, it make up about 6 to10% of all Osteosarcoma, Jaw OS affect mandible more than maxilla, and usually present themselves in 3rd and 4th decade of life. there are three type of Jaw OS Osteoblast, Chondroblast and Fibroblast.

We report a case of 45 years old women with facial asymmetry with chondroblast OS of the left Maxilla, Tumor excision is performed twice with adjunctive Chemotherapy and Radiation therapy in the second surgery, recurrent and local spread of the tumor in base of skull was the cause of death.

Keywords: Osteosarcoma, Maxilla, Malignant, Tumor, Chondroblast

1. Introduction

Osteosarcoma is the most primary tumor in the jaw, it is rare in maxillofacial region rather than long bones[1], it make up about 6 to10% of all Osteosarcoma[1,2], Jaw OS affect mandible more than maxilla, and usually present themselves in 3rd and 4th decade of life. Although OS of the jaws less aggressive than those of the long bone[2,3], it has high tendency or recurrent and rare metastasis rate, early diagnosis and safe margin resection 5mm give us better rognosis[3,4].

Histopathological OS is malignant tumor characterized by direct formation of Osteoid by neoplastic cell, it subdivided to osteoblast OS, Chondroblast OS and Fibroblast OS which is very rare in maxillofacial region, and Chondroblast OS has the worst prognosis than the other type of OS[5,6,7].

2. Case Report

A 45 years came to our clinic complaining from facial asymmetry from 3 months ago (Figure 1),

Figure 1

the skin overlying the tumor was normal color and texture, Intra orally there was clearly sign of inflammation of the gingiva in the affected side. Assessment by CT scan of head and neck with contrast material revealed irregular bony deformity with new bone formation Osteoid (Figure 2)

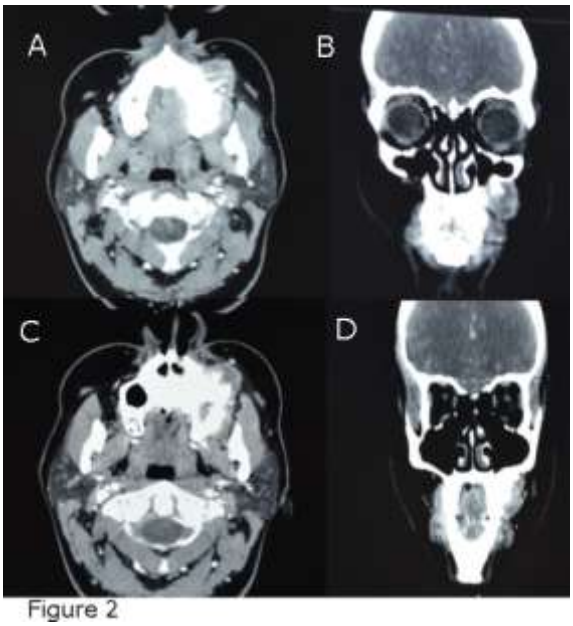

Figure 2

associated with malignant and periosteal reaction, seen in the lower part of left maxilla. on 1 August 2016 A Biopsy is taken under local anesthesia, which is confirmed a Chondroblast OS , the hemi-maxillectomy is performed under general anesthesia using Weber verguss approach (Figure 3)

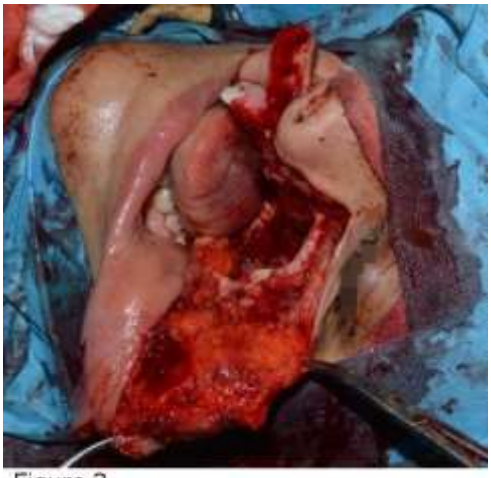

Figure 3

in the end of August 2016 , the osteotomy is done by lindenmann drill with almost more than 5mm safe margin. The wound is closed in layers (Figure 4-5).

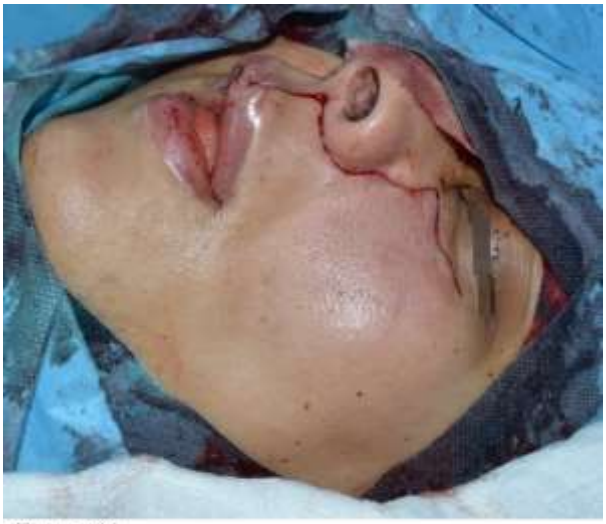

Figure 4

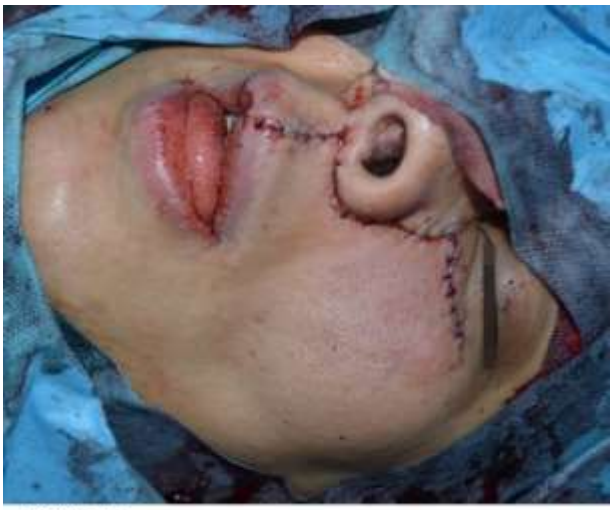

Figure 5

No adjunctive treatments are received at this stage, Controlled Ct scan is taken in November 2016 shows us local recurrent of the tumor in pterygoid bone , floor of nasal cavity, the Tumor is resectioned again under GA by using of intra-oral approach in 21 November 2016, she received 4 cycles adjunctive chemotherapy based on Cisplatin and Adriamycin, she has received Radiation therapy using high technology technique IMRT (**I**ntensive **M**odality **R**adio**T**herapy) On 12 June 2017 Contrast MRI is shows us large recurrent lesion at the hard palate right side, and lateral Nasal wall right side, there is spread of the tumor to the right ptrygoid bone, also there is extension into the right cavernous sinus, and sphenoid bone, She died within few months after last MRI.

3. Discussion

World Health Organization has defined OS as primary tumor of the bone which characterized by ability of the mesenchymal cell to produce the Osteoid, it make up 4 to 10 % of the all Osteosarcoma[1,2], Jaw OS consider less aggressive than long bone OS, with less tendency to metastasis. Most Authors reported, Jaw OS affect mandible more than Maxilla[2,3,4] , Abdulmalak Al-Yahya, et al reported Jaw OS affected the maxilla more than the mandible. The posterior part of the mandible body, angle and the ascending ramus more affected the anterior part of the mandible[7]. Jaw OS is affected the Male more than female , it usually occur in the 3rd, 4th decades of life, it appear in the early stage as painless hard swelling in the jaw with bone expansion[1,2,4], therefore it misdiagnosed in this stage, and the most jaw OS diagnosed in the advanced stage, later the patient complaining of pain , ulcer due to secondary infection, teeth mobility due to widening of the periodontal ligament space, when tumor reach to periodontal ligaments the tumor is growth in the periodontal space , Paresthesia in the case of the jaw OS occurring near the inferior alveolar nerve or infra-orbital nerve were reported by Abdulmalak Al-Yahya, The Jaw OS has less tendency to metastasis than the long bone OS, it unlike to metastasized to lymph node therefore the neck dissection is not necessary in the management of the Jaw OS. Authors consider previous radiation therapy in the head and neck is predisposing factors of the jaw OS, others consider Paget's disease and fibrous dysplasia are predisposing factors of the Jaw OS, Camilo Jimence et al reported many OS patient have hyperthyroidism. Rdiographically, "sunburst appearance" is the typical feature of long bone OS, it usually seen unclearly in the Jaw OS, Jaw OS present as radiopacity, radiolucency or, heterogeneous lesion with ill define margin[2]. Histopathological, there are three type of OS fibroblast , Osteoblast and Chondroblast , Fibroblast is unlikely to occur in the maxillofacial region , the Chondroblast is more frequently in Maxillofacial region, according to Histopathological type Junior [8]and his college reported the is no relation between these Histopathological type and prognosis of the tumor. Resection of whole tumor with safe margin 5mm or more give us better prognosis, Amaral et al reported aggressive surgical resection with adjunctive radiation therapy is enough to management of the primary tumor, and they mention the recurrent tumor should be resection with adjunctive radiation therapy and radiotherapy.

4. References

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