SS 8.5

CBCT in the diagnosis of osteonecrosis of the jaws

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Short Summary: ONJ is associated with bisphosphonates, and recently with antiangiogenic drugs. Another cause is radiotherapy. Few papers have previously investigated the value of CBCT in the diagnosis of ONJ.

Purpose/Objectives: To describe the CBCT findings in the diagnosis of osteonecrosis of the jaws (ONJ) according to a new staging system of ONJ.

Methods and Materials: 9 patients (5 women, 4 men, 54-76 yrs.) affected by ONJ were studied with a CBCT device (90 kV, 12.5 mA, 0.25 mm voxel size) in 2012-2013. 7/9 patients were treated with bisphosphonates (5 for bone metastasis, 2 for osteoporosis), 1/9 patient was treated with an antiangiogenic drug, 1/9 patient received radiotherapy. Patients were divided in 3 stages, according to a new clinical-radiologic classification of ONJ, made by SICMF (Italian Society of Maxillo-Facial Surgery) and SIPMO (Italian Society of Oral Medicine), that gives more prominence to the radiologic findings and includes 3 stages: stage 1 focal ONJ, a) symptomatic, b) asymptomatic; stage 2 diffuse ONJ, a) symptomatic, b) asymptomatic; stage 3 complicated ONJ. Axial, panoramic, cross sectional, multiplanar and 3D reformations were analysed.

Results: Radiologic findings of ONJ were found in maxilla (7/9 patients) and mandible (7/9 patients). Patients were staged as follows: 1/9 stage 1b), 1/9 stage 2a), 4/9 stage 2b), and 3/9 stage 3. CBCT findings varied from simple osteosclerosis in stage 1b), to multifragmentary fracture, extraoral fistula, and fistula between oral cavity and maxillary sinus or nasal cavity in stage 3 patients, passing through osteonecrosis and bone sequestrum in 7 patients in stage 2-3.

Conclusion: CBCT is a valuable tool in the radiologic assessment of ONJ and proved useful in this new SICMF-SIPMO staging system.

Keywords: Staging, jaws, osteonecrosis, CBCT

ORAL PRESENTATIONS