Advanced imaging findings and computer-assisted surgery of suspected synovial chondromatosis in the temporomandibular joint.

Abstract:

Synovial chondromatosis of the joint occurs mainly in teenagers and young adults. Only 3% of these neoplasms are located in the head and neck region. Synovial chondromatosis of the temporomandibular joint is therefore a very rare disorder. Therefore, developing a working, histological confirmation is required for differential diagnosis. In this case series, the outcome of histological investigation and imaging techniques are compared. Based on clinical symptoms, five cases of suspected synovial chondromatosis of the temporomandibular joint are presented. In each of the subjects, the diagnosis was confirmed by histology. Specific imaging features for each case are described. The tomography images were compared with the histological findings. All patients demonstrated preauricular swelling, dental midline deviation, and limited mouth opening. Computer-assisted surgery was performed. Histology disclosed synovial chondromatosis of the temporomandibular joint in four cases. The other case was found to be a developmental disorder of the tympanic bone. The diagnosis of synovial chondromatosis of the temporomandibular joint can only be based on histology. Clinical symptoms are too general and the available imaging techniques only show nonspecific tumorous destruction, infiltration, and/or residual calcified bodies, they are only for advanced cases. A rare developmental disorder
of the tympanic bone--persistence of foramen of Huschke--has to be differentiated.