Case presentation: CBCT with SCANORA® 3Dx
Foreign body in right maxillary sinus

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FINDINGS

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Very hyperdense and well-defined structure directly behind the facial wall of the right maxillary sinus (Fig. 1-2).

Fig. 1-2 Axial and sagittal views of a hyperdense structure in the sinus.

There is no sign of any inflammation or reaction in the adjacent mucosal lining. Hyperdense structures can be visualized very smoothly using the Maximum Intensity Projection, MIP (Fig. 3).

Fig. 3 MIP visualization of a hyperdense object.
FINDINGS

Evaluation

Structures like the ones mentioned above are very uncommon in a maxillary sinus. High density objects can be found in conjunction with a fungal disease - mostly accompanied by a severe chronic inflammation.

Therefore, the primary diagnosis for such a finding is a foreign object like impression material.

Editor’s comment:

Maximum Intensity Projection (MIP) consists of projecting the voxel with the highest attenuation value on every view throughout the volume onto a 2D image. This method tends to display bone and contrast material–filled structures preferentially, and other lower attenuation structures are not well visualized.

The OnDemand3D™ software (Cybermed) offers this projection as an option (Fig. 4 a, b).

Fig. 4 a, b  Rendering options in OnDemand3D™ software.

1. Cody DD. AAPM/RSNA physics tutorial for residents: topics in CT. Image processing in CT. Radiographics. 22 (5): 1255-68. Radiographics (full text) - Pubmed citation.