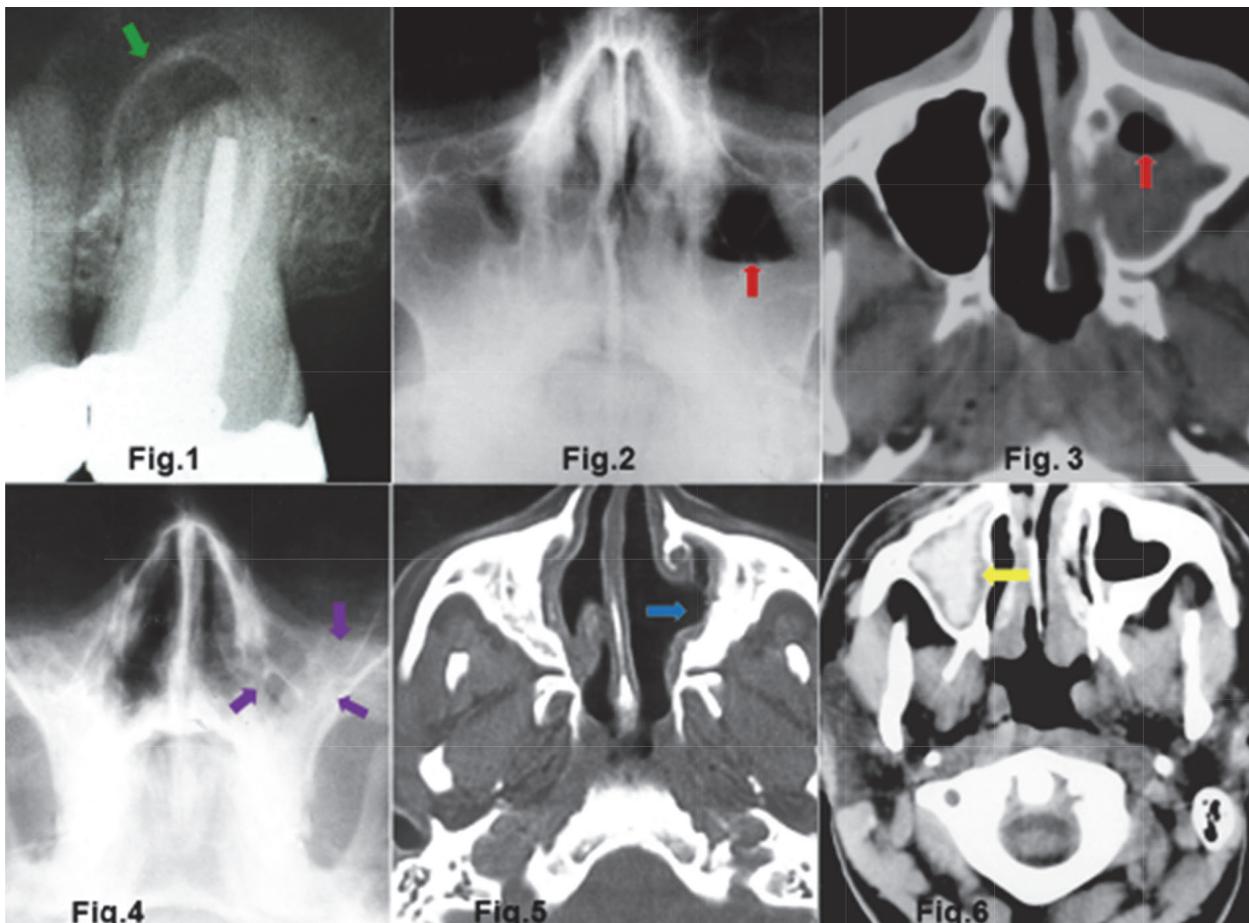


Maxillo-facial radiology case 153

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An elderly female patient presented with the main complaint that she had not slept on occasions over the past three weeks due to a severe throbbing pain on the right side of her face. She reported experiencing the same pain when bending down or drinking hot coffee. Figure 1 is an intra-oral radiograph of the third molar of the patient. What important radiological findings are discernible and what are your differential diagnoses?



INTERPRETATION

The intra-oral radiograph (Fig.1) shows a lesion at the apex of the 18. The lesion has extended to destroy a portion of the antral floor. There is also loss of the lamina dura and the presence of a "halo" (green arrow) of periosteal new bone suggestive of an osteitis. Some authors refer to this lesion as a localized mucositis or sinusitis of the left maxillary sinus. A Water's view of another patient (Fig.2) shows an opaque right maxillary sinus and a classic air-fluid level (red arrow) in the left sinus, features which are consistent with acute sinusitis. Another example of acute sinusitis is discernible on the axial CT (Fig.3) scan of another patient showing a clearly opacified left maxillary sinus with mucosal thickening and an air-fluid level (red arrow). Acute sinusitis presents clinically with facial pain, headaches, local tenderness and purulent discharge and is a common infection of the maxillary sinuses. Figure 4 is a Water's view of the maxillary sinuses showing a very sclerotic right sinus and small sclerotic maxillary antra in the left sinus (purple arrows), which is suggestive of chronic sinusitis. An axial CT

scan (Fig.5) of the same patient shows marked thickening of the walls of the right maxillary sinus with a thickened mucosa. The medial wall defects indicate that prior nasal antrostomies had been performed (blue arrow).

Chronic sinusitis is an infection of the sinuses that persists beyond the acute phase or fails to respond to treatment. Impaired sinus drainage is a predisposing factor. As in the acute form, chronic sinusitis is characterized by mucosal oedema and inflammation. With time, reactive sclerosis of the sinus walls and irreversible fibrosis of the sinus lining may develop. In another case in which the patient complained of nasal discharge and sinus pain an opportunistic infection, aspergillus sinusitis presented as a chronic sinusitis which did not improve with antibiotics or irrigation. In 90% of cases Aspergillus fumigatus was the offending organism, as it was in this case. An axial CT (Fig. 6) scan of the affected patient shows thickened mucosa of the right maxillary sinus (yellow arrow) and the thickened walls of the left sinus, reflecting chronic sinusitis.

Reference

1. Farman AG, Nortje CJ & Wood R E: Oral and Maxillofacial Imaging, 1st Ed, Mosby. St. Louis, Missouri 1993 pp 382-5.