Computed Tomography Findings of Fungal Rhinosinusitis

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Fig. 1. (A) The axial view of CT scan of FRS shows calcified plaque (yellow arrow) in the right maxillary sinus with thickened bone (green arrow). (B) The coronal view of CT scan of FRS shows calcified plaque (yellow arrow) in the left maxillary sinus with enlargement of sinus cavity. (C) The axial view of CT scan of FRS shows calcified plaque (yellow arrow) in the right maxillary sinus with thickened bone (green arrow). (D) The coronal view of CT scan of FRS shows calcified plaque (yellow arrow) in the left maxillary sinus with enlargement of sinus cavity.
Fungal rhinosinusitis (FRS) encompasses a wide variety of fungal infections, ranging from irritation to rapidly fatal infections. Fungi colonize the nasal cavity and paranasal sinuses invasively or noninvasively. The prevalence of FRS has been increasing over several decades. There is evidence that the incidence of fungal ball is increasing because detection techniques and methods, such as radiologic evaluation, fungal culture techniques, and surgical technologies, have improved.

In FRS, computed tomography (CT) scans show opacity of the cavity associated with a hyperdense area within the lesion and thickened bone. The most frequent fungus found in a fungal ball is *Aspergillus fumigatus*. Removal of the mass with functional endoscopic sinus surgery is the treatment of choice for FRS.

The typical CT findings of FRS are defined with spotted calcified plaque in the unilateral paranasal sinus, including the maxillary and sphenoid sinuses (Fig. 1 yellow arrow). Erosion of the sinus wall and enlargement of the sinus cavity also occurs. An axial CT view of a patient with FRS shows a filling defect in the maxillary sinus with thickened bone (Fig. 1. A, C). A coronal CT view of a patient with FRS shows sinus mucosal hypertrophy and hyperattenuation of calcified plaques (Fig. 1. B, D).

The incidence of FRS has been increasing recently due to environmental factors, condition of individual immune systems, and interaction of local tissue conditions. It is difficult to distinguish between chronic rhinosinusitis and FRS by merely looking at the symptoms. Therefore, CT scan is a useful method for diagnosing FRS.

**Key Words:** Air crescent, CT findings, Fungal rhinosinusitis

**REFERENCES**


**CONFLICT OF INTEREST**

In relation to this article, we declare that there is no conflict of interest.

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**PATIENT CONSENT STATEMENT**

Patients provided written informed consent for the publication and the use of their images.