SUMMARY

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The radiological examination of the sinonasal cavity is difficult because of the complicated surrounding bony structures . Conventional radiographic techniques are important in the evaluation of sinus disease, as a general survey of the bony and soft tissue changes .

However, the details of soft tissue involvement and the fine details of the bony changes are poorly seen on plain radiographs . Conventional radiography has been largely replaced by CT . Computed tomographic sections are clear of overlying structures and can demonstrate the bony framework and the normal soft tissue structures .

CT is useful in a wide spectrum of sinonasal lesions : Congenital anomalies, trauma, inflammations and neoplasms . In case of congenital anomalies, coronal CT reveals in detail the sinus configuration . In addition, it also shows the associated changes in the orbit, skull and the brain as for example , in encephalo-menigoc eles.

CT is the primary diagnostic imaging modality used in the evaluation of complex facial trauma after routine screening films are obtained, due to its superior contrast resolution which also allows direct visualization of soft tissue .

Different sinonasal lesions often simulate each other both in their clinical and radiographic presentation . The early symptoms of chronic rhinosinusitis (nasal obstruction or discharge) are identical to

those caused by neoplasms or infections confined to the sinonasal cavity . CT scan should be performed when a patient with known rhinosinusitis develops ominous new symptoms such as epistaxis, facial swelling, persistent facial pain, facial numbness, ocular dysfunction or proptosis .

CT is preferably performed after the acute excerbations of recurrent sinusitis have been optimally treated medically in order to better demonstrate the underlying cause of recurrent or persistant inflammation .

CT is also valuable, in visualization of tumour extension to important areas such as the infratemporal fossa, orbit, pterygopalatine fossa, nasopharynx and intracranial cavity .

Coronal CT cuts demonstrate the anatomical details in an orientation more or less similar to and very helpful in endoscopic assessment and management . Accordingly, coronal CT has a greater importance for the preoperative assessment of patients for endonasal endoscopic surgery and follow up of surgical nasal diseases .

CT is of particular value in the assessment of patients with persistant complaints after sinus surgery . The most common cause of failure in therapy directed at the major sinuses has been persistant ethmoid disease s . In these cases, CT is mandatory because inflammatory changes in the middle meatus are poorly seen on plain radiographs .

CT is also indicated when a conventional sinus series show sinonasal opacification with bone destruction . The information

obtained in these cases prove essential in surgical planning by demonstrating early involvement of adjacent structures such as the orbits or cranial cavity . With CT, it is possible to identify osseous involvement of the orbital wall and extension of the tumour into the extraocular muscles .