

Case Report On paranasal sinusitis with Diabetes mellitus and hypertension

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Abstract

Background: An inflammation of the mucous membranes in the paranasal sinuses is known as paranasal sinusitis. The facial bones close to, behind, and above the nose have cavities called sinuses. All paranasal sinuses have mucous membrane lining and are joined to the nasal cavities.

Case presentation: A 70 years old male came to the Ear Nose Throat department with the chief complaint of generalized headache , dull activity .Also complaint of reduce vision on both eye , blur vision of near by object and unable to see distant object, reduced sensation of smell . Patient had history of Diabetes mellitus since 5 year and having hypertension since 2 year and patient was diagnosed with covid -19 since 5 month back, was hospitalized for 15 days.

On arrival physical examination of the face was carried out with shows swelling around both the eye , Nostrils finding are yellowish greenish foul smelling debris in bilateral nostrils septal perforation present posteriorly .MRI and histopathology was done later he was treated antibiotics and analgesic.

Keywords: paranasal sinusitis, sinusitis.

INTRODUCTION

Paranasal sinusitis is defined pathologically, by transient inflammation of the mucosal lining of the paranasal sinuses lasting less than 4 weeks. Clinically, it is characterised by nasal congestion, rhinorrhoea, facial pain, hyposmia, sneezing, and, if more severe, additional malaise and fever. The paranasal sinuses, comprising the frontal, maxillary, ethmoid and sphenoid sinuses, have caused consternation and debate over their true function over the course of nearly two millennia. A common cold or allergies are common causes of sinusitis. A bacterial infection or fungus that makes the sinuses expand and become blocked can potentially be the cause. Over the span of over two millennia, the paranasal sinuses, which include the frontal, maxillary, ethmoid, and sphenoid sinuses, have generated controversy and discussion about their true function. Paranasal sinusitis complications are still a significant public health issue. We describe a patient with diabetic ketoacidosis who developed a sinusitis complication that involved the orbit. It was caused by bacterial sinusitis, not rhinocerebral mucormycosis, and led to the development of carotid artery blockage and left cavernous sinus thrombophlebitis. Sinusitis complicates around 0.5% of all upper respiratory tract infections; depending on the context, the frequency of acute sinusitis ranges from 15 to 40 episodes per 1000 patients per year. 1,2 Adults are significantly more likely to experience it than toddlers, whose sinuses are still developing.

CASE SCENARIO

A 70 years old male came to the Ear Nose Throat department with the chief complaint of generalized headache since 20 days , insidious onset, dull activity type moderately intensity, relive partially taking medication. Also complaint of reduce vision on

both eye insidious onset progressive since 15 days, blur vision of near by object and unable to see distant object, reduced sensation of smell since 2 month.

Patient had history of Diabetes mellitus since 5 year he undergoing the treatment of this private hospital on tablet gelzide BD and having hypertension since 2 year tablet Telmisartan 40 mg and patient was diagnosed with covid -19 since 5 month back, was hospitalized for 15 days on tablet

On arrival,physical examination of the face was carried out with shows swelling around both the eye , Nostrils finding are yellowish greenish foul smelling debris in bilateral nostrils septal perforation present posteriorly .

Diagnostic assessment has been done total blood test :- HbA1c 9.80% AIC NGSP, Creatinine 1.3 mg/dl

Radiological investigation has been done

Histopathology patients nasal pus and necrotic debris and bone from left nasal cavity. Received multiple , irregular, whitish brown tissue pieces aggregating 5×4×2 cm.

Given tissue pieces shows evidence of mucormycotic osteomyelitis with bacterial infection and granulation on histopathology.

MRI reports reveales that enhancing mucosal thickening in bilateral maxillary , ethmoid ,sphenoid and left frontal sinuses as described. Post operative changes as described. Chronic lacunar infarcts in bilateral gangliocapsular regions . Age related atrophic changes with small vessel ischemic disease.

Currently patient undergone on Functional endoscopic sinus surgery under general anaesthesia after receiving a medical fitness.

Doctor manage injection Augmentin

Clindamycin 60 mg intravenous BD, Injection pantoprazole 40mg intravenous BD , Tablet chymoral fort ,tablet Telmisartan 40 mg, tablet zerodol orally BD,tablet limcee 50 mg , tablet pasaconazole 300 mg OD, injection multivitamins in 10 ml dissolved in 500 ml normal saline route intravenous once a day, injection liposomal amphotericin 150 mg once a day intravenous.

DISCUSSION

The most frequent risk factor for subdural empyema is paranasal sinusitis, particularly frontal sinusitis. A subdural empyema develops as a result of septic thrombophlebitis of the mucosal sinus veins, which causes retrograde infection extension with bacterial drainage into the dural venous sinuses and cortical veins. Subdural empyema can also develop as a side effect of head trauma, from an infection of a subdural effusion, or from a direct infection of the subdural space occurring during a neurosurgical procedure like draining a subdural hematoma [1-10].

In an upper respiratory infection (URI), the enlarged nasal mucous membrane blocks a paranasal sinus' ostium, allowing oxygen from the sinus to enter the mucous membrane's blood vessels [11-20].

The main side effect of sinusitis is the localised spread of bacterial infection, which can result in epidural or brain abscess, cavernous sinus thrombosis, or periorbital or orbital cellulitis.

Clinical evaluation is typically used to diagnose sinus infections. Acute sinusitis does not often require imaging unless there are signs of complications, in which case a CT is performed. In order to rule out a periapical abscess in chronic maxillary sinusitis, CT scans of the maxillary sinus are performed more frequently.

Microbial cultures are infrequently performed since a nasal discharge swab is insufficient for a viable culture; instead, a sinus endoscopy or sinus puncture sample is required. Cultures are normally only performed in immunocompromised patients and when empiric treatment fails.

It can initially be challenging to discern between an upper respiratory infection and sinusitis in youngsters (URI). When purulent rhinorrhea lasts more than 10 days, combined with weariness and a cough, bacterial sinusitis is suspected. A fever is unusual. There could be discomfort or localised pain in the face [21-25].

According to the Infectious Diseases Society of America, the following traits can be used to determine which patients need to start taking antibiotics:

mild to moderate sinus symptoms that last for ten days or less

severe symptoms for three to four days, such as a 39° C fever and excruciating agony

Typical viral URI symptoms that initially go better before getting worse (also known as "double sickening" or "biphasic disease")

CONCLUSIONS-

In this case we discuss about the many types of symptoms about related to paranasal sinusitis. In this case, we see the symptoms of headache since 20 days, insidious onset, dull activity type moderately intensity, relive partially taking medication. Also complaint of reduce vision on both eye insidious onset progressive since 15 days, blur vision of nearby object and unable to see distant object, reduced sensation of smell since 2 month. And after examination of face was carried out with shows swelling around both the eye, nostrils finding are yellowish greenish foul smelling debris in bilateral nostrils septal perforation present posteriorly after all the associated diagnosis the physician started the treatment of intravenous fluid clindamycin 60 mg, inj. Pantaprazole 40 mg, inj. Multivitamin 10ml, inj. Liposomal amphotericil 150 mg bd, tablet chymoral fort, telmisartan 40 mg, Zerodol, limcee an healthy diet as per dietician. There were various studies taken as the case all over the world as comparison of that study level of our institution.

Nearly a patient with a paranasal sinusitis may anticipate a full recovery from this typical deadly ailment if is diagnosed and treated in a timely manner.

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