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Case Report

An Unusual Complication of Acute Sinusitis: Isolated Unilateral Ptosis

Müge Özçelik Korkmaz[1]*, Mehmet Güven[1], and Kıyasettin Asil[2]

[1]*Sakarya University Medical Faculty Ear Nose Throat Clinic, Turkey*

[2]*Sakarya University Medical Faculty Radiology Clinic, Turkey*

***Corresponding author**

Muge Ozçelik Korkmaz, Sakarya University Medical Faculty Training and Research Hospital Ear, Nose, Throat Service. Adnan Menderes Main St. Saglik St.No:195.ADAPAZARI/Turkey, Postal code:54100; Email: ozcelikmuge@gmail.com

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Keywords

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Abstract

The most common symptoms of acute sinusitis are nasal and post-nasal purulent drainage, facial pain/pressure and nasal stuffiness. Uncommonly features of orbital and intracranial complications maybe present at diagnosis. Sudden onset isolated unilateral ptosis related to acute sinusitis is not common clinical finding and frequently associated with cavernous sinus thrombosis. A 22 year old healthy male presented with unilateral isolated ptosis related to acute sinusitis without the other symptoms of orbital or intracranial complications. In the paranasal sinus computerized tomographic imaging were diagnosed maxillary, ethmoid, frontal and sphenoid sinusitis at same side. On ophthalmolojic examination vision and fundus control were normal. Soft tissues signals compressing rectus muscle, optic nerve, cavernous sinus and optic vein softly were exist in cranial magnetic resonans imaging. The symptoms were regressed with medical treatment in 10 days. We would like to present in this paper an unusual ocular complication of acute sinusitis which isolated ptosis case.

ABBREVIATIONS

CT: Computerized Tomography; WBC: White Blood Cell; CRP: C-reactive Protein; MRI: Magnetic Resonans Imaging

INTRODUCTION

Sinusitis which is the infection of paranasal sinus mucosa is an endemic disease seen in society regardless of age, gender and race. Inspite of becoming widespread treatment alternatives nowadays, the infection causes serious and high mortal complications by spreading to orbit and intracranial builds. We see the most common orbital complications based on close anatomical relations and organic reasons. Orbital complications frequently seen in pediatric age group is defined by Chandler and his colleagues as preseptal cellulitis, orbital cellulitis, subperiosteal abscess, orbital abscess and progressively cavernous sinus thrombosis [1]. According to the level of seriousness, there might be slight symptoms like rubor on eyelid, edema and local fever rise. On the other hand symptoms might be disability of eye movements, proptosis and vision loss in advanced level. One of the symptoms that can be progressed in cavernous sinus palsy depending upon cranial nerve palsy is ptosis. Yet isolated process of ptosis as sinusitis complication is not common without vision loss and impact on eye movement [2,3]. Even a few cases about the subject has been notified in adolescence age group in literature, our case differs in a patient who belongs to an adult patient group having no other health problems.

CASEPRESENTATION

27 year-old male patient applied to emergency service in our hospital with on going and even increasing complaints of ptosis on eyelid, nasal and post-nasal drainage, pain around right eye and frontal side for 3 days. The patient was directed to us just after infection symptoms are determined on the same side during cranial CTtaken in emergency service for patient's ptosis etiology. During ear-nose-throat examination of the patient, ptosis on right upper eyelid, purulent secretion in both nasal cavities, postnasal heavy purulent secretion were determined. The patient was conscious and general medication condition was fine. Fever was within range. WBC, sedimentation and CRPvalues were high in laboratory evaluation. It was evaluated that eye movements were free in every direction for both eyes, visual acuity was complete in both directions and light reflexes are exact. High density rise was determined inside of right maxillary, ethmoid, sphenoid and frontal sinus on right nasal cavity during paranasal sinus CT (Figure 1). Cranial magnetic resonans angiography and orbital MRI examinations were fulfilled to exclude potential cavernous sinus thrombosis and orbital involvement for the patient. Soft tissues signals compressing rectus muscle, optic nerve, cavernous sinus and optic vein softly were exist during cranial MRI. Contrast involvement depending on infection effects optic nerve, surrounding soft tissue, ethmoid mucosa and around cavernous sinus on the right side was observed during T1-weighted MRI sequence after contrast material (Figure 2 A,B). Cavernous sinus thrombosis was not occurred.

As a result of infectious diseases consultation, it is decided to prescribe Vancomycin 3x1 and Flagyl 2x1 as parenteral antibiotherapy. Ptosis was completely regressed in the fifth day of treatment. Moreover complaints about purulent nasal secretion and headache were decreased. WBC, sedimentation and CRP values reached normal level on blood table in the tenth day of treatment. The patient was discharged from hospital after 10 days of medical treatment (Figure 3 A,B).

DISCUSSION

Complications that might be progressed related to paranasal sinus infections are shortly counted as local, orbital and intracranial complications. By the reason of that orbital has close anatomic relation with sinuses, orbital complications are the most common in all complications [4]. Ptosis that means dropping of the upper eyelid can be caused by myogenic, neurogenic, aponeurotic, mechanic or traumatic reasons [5]. Levator palpebral superior muscle giving the movement of upper eyelid innerves superior division of oculomotor muscles, 3th cranial nerve, which moves inside of cavernous sinus with other nerves after stemming brain. Because of this reason, cavernous sinus thrombosis, which is sinusitis complication, has other symptoms like chemosis and proptosis besides ptosis depending effects on other cranial nerves. Furthermore problems about general state of health, fever and clouding of consciousness are generally observed as well [6]. Isolated ptosis symptom coming along with sinusitis has been defined for few times in literature. Sinusitis is defined as incidental in radiological displays while searching for underlying pathology on frequently fulminant ptosis cases. Swift and his colleagues detected infection on ethmoid, frontal, and maxillary sinus, which are all at the same side, during the cranial CT imaging of a child patient who came to hospital with complaints of painful ophthalmoplegia and ptosis. It was informed that symptoms regressed completely with antibiotic and nasal irrigation [7]. In addition Akubiolo and his colleagues detected diagnosis of sinusitis at the same side on 15 year-old male patient who complained about pain and ptosis. There was no effect on eye movement and visual acuity. All symptoms were healed completely by medical treatment like similar cases. Especially orbital complications, are generally seen in pediatric age group [8]. Being different that similar cases

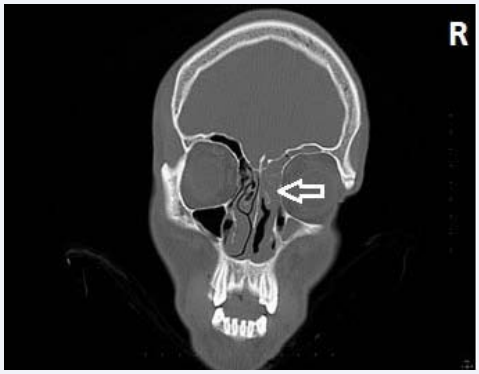

Figure 1 EParanasal sinus CT, coronal is showing inflammatory changes and high density in right maxillary, ethmoid and frontal sinuses.

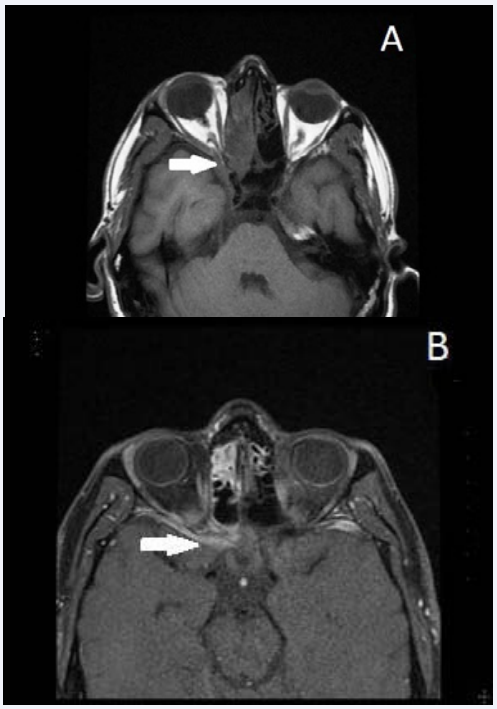

Figure 2 Contrast involvement depending on infection effects optic nerve, surrounding soft tissue, ethmoid mucosa and around cavernous sinus on the right side was observed during T1-weighted MRI sequence after contrast material.

Figure 3 A: Ptosis on the right side eye of patient.
B: Ptosis was completely regressed with medical therapy.

mentioned above, our patient belongs to adult group and he does not have chronic disease or immune deficiency in his background and it was remarkable that he has never been treated because of sinusitis. It was thought that the reason why ptosis without effect on eye movement occurred was that the infection on ethmoid sinuses caused oculomotor nerve effecting division going to levator palpebral muscle by pressing to cavernous sinus. Another theory on this subject is that giving micro divisions inside maxillary sine and ethmoid sinuses about infection secondary importance might lead to ptosis. Besides the first thing come to mind about this diagnosis is that the patient did not have any other symptoms except ptosis even he had cavernous sinus thrombosis. Result of radiological displays excluded cavernous sinus thrombosis diagnosis.

The first preference to see the condition of sinuses when there are sinusitis complications is CT. In addition to this, contrast-enhanced and diffusion-weighted MRI has great importance for evaluating especially orbital and cranial builds [9]. In our case, there was secondary heavy density infection rise on sinuses on the same side with ptosis during tomographic examination. Data about ptosis etiology was acquired by determining cavernous sinus and density rise around optic canal were with contrast-enhanced and orbital MRI examination. Furthermore cavernous sinus thrombosis was excluded.

The patient might be taken as outpatient with local and systematic medical treatment options when it is preseptal cellulitis. On the other hand, the patient must be hospitalized and parenteral treatment must start when it is on orbital cellulitis .If abscess formation on orbital cavity is grown, it has to be drained surgically and infection on involved sinuses has to be excreted surgically 10. Medical treatment started when it was confirmed that there were no additional orbital involvement symptoms in our case. Moreover, all complications were completely healed at the end of 10th day as it is similar with cases in literature.

CONCLUSION

Isolated ptosis is not a common case in acute sinusitis complications. If cases which are similar with the one mentioned above become more usual in literature, ptosis might be added to the list as complication depending on sinusitis in the future.

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