

Cystic Fibrosis Research News

Title:

Ethmoidal Mucocele Causing Proptosis in a Pediatric Patient with Cystic Fibrosis: a case report.

Lay Title:

Intracranial mucous benign cyst causing bulging eye in a child with cystic fibrosis: a case report.

Authors:

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What was your research question?

Is an ear nose and throat follow up necessary to prevent serious complications in people with cystic fibrosis?

Why is this important?

In people with cystic fibrosis (CF), problems in ear, nose and throat (ENT) is often not diagnosed despite their high frequency and their possible complications. Chronic or recurrent inflammation of the nose and sinuses is often seen and may be related to nasal polyps. A potential sign of CF in the nose and sinuses is a “mucocele”: a cyst that produces mucus and can grow slowly in the sinuses along the nose. Commonly, they behave as benign masses, but can become enlarged by an accumulation of secretions, and may displace and destroy the surrounding bone with complications, around the eye sockets, or even in the skull (intracranial).

What did you do?

We described the case of an intracranial mucocele – a cyst affecting the skull – which led to eye problems in a 2-year-old girl with CF who had no previous serious complications but who progressively developed a bulging of her left eye. A Magnetic Resonance Image (MRI) (Figure 1) showed a cyst was pushing the eyeball out of place, and squashing one of the eye muscles and the eye (optic) nerve. Surgery was performed to remove the cyst. The cyst was drained

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and the discharge was sent to the lab for microbiology assessment. A bacteria called *Escherichia coli* was found and the child was treated with antibiotics and corticosteroids which completely cleared up her symptoms.

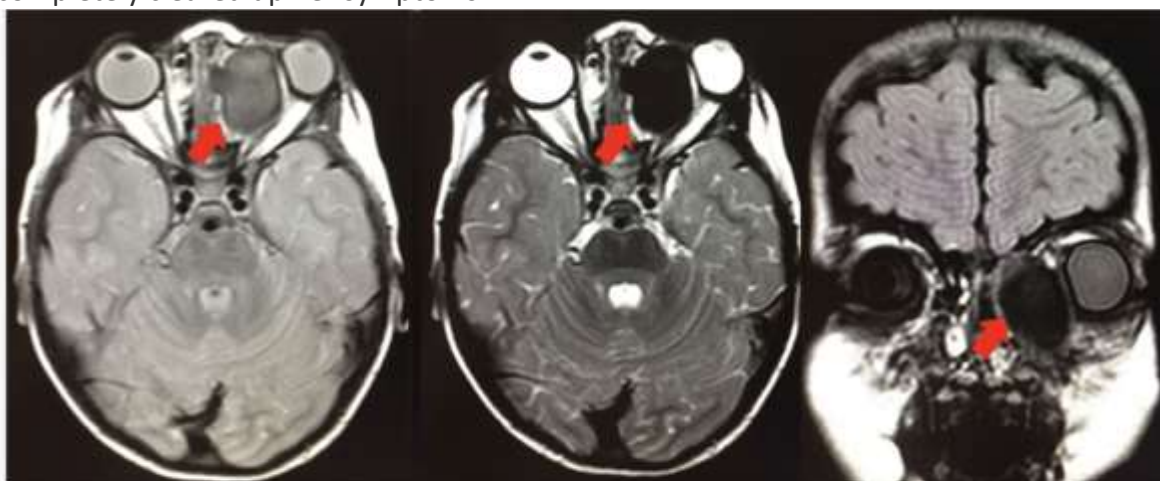


Figure 1: Mucocele in Magnetic Resonance Imaging

What did you find?

A mucus-producing cyst is not a common complication in people with CF, but its importance comes from the severity of the symptoms and complications it could cause, as it was the case in our patient whose optic nerve was being squashed which could have resulted in severe damage to her eyesight if left untreated. This case also shows the potential effects of a bacteria that is not always considered relevant in people with CF but that recently has been recognized as potentially having clinical consequences in the outlook of people with CF.

What does this mean and reasons for caution?

We strongly recommend people with CF are closely followed by an ENT specialist to prevent possible complications in the future.

What's next?

The clinical relevance of our findings needs further research, and this case report supports the idea that *Escherichia coli* should be considered as a relevant bacteria in people with CF.

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<https://pubmed.ncbi.nlm.nih.gov/35246383/>