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Figure. Patient before (A), during nasal exposure with ammonium chloride (B), and 2 minutes after exposure (C).

Nasally triggered headache

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A 42-year-old woman who had a history of left-sided partial choanal atresia, surgically corrected at the age of 2, had frequent episodes of an intense left-sided headache over an 18-year period. The pain was felt deep in and around the eye, and radiated into the forehead, temple, and cheek. Each headache episode was triggered by inhalation of substances irritating the nasal mucosa, such as acetone, ammonia, or scouring agents, and lasted, if untreated, for several hours. The headache was always preceded by a swelling of the left side of her face. Clinical neurologic examination, cranial MRI, electroencephalography, and electrically elicited blink reflexes were unremarkable. Exposure of the left nostril (figure, B) to ammonium chloride was stereotypically followed by

edema of the left eyelid (after 2 minutes), conjunctival injection (after 3 minutes), lacrimation, rhinorrhea, hemifacial edema (figure, C), and after 10 minutes by attacks of excruciating headache. Swelling and headache lasted up to 10 minutes after inhalation of oxygen or 20 minutes after IV corticosteroids.

This case suggests that the trigeminal system can play a major role in headache, probably associated with increased trigeminal afferent activity from the nasal mucosa.¹ The role of trigeminal afferent activity is also emphasized by a case with short lasting unilateral neuralgiforme headache with conjunctival injection and tearing syndrome triggered by speaking, chewing, and touching the face.²

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Nasally triggered headache

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Neurology 2002;58;294

DOI 10.1212/WNL.58.2.294

This information is current as of January 22, 2002

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