

BILATERAL CLASSICAL TRIGEMINAL NEURALGIA WITH CONCOMITANT CONTINUOUS PAIN IN CROUZON SYNDROME: A CASE REPORT

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Background. According to ICHD-3 criteria, classical trigeminal neuralgia with continuous pain is characterized by recurrent unilateral paroxysms accompanied by persistent background pain within the affected trigeminal distribution. Peripheral and/or central sensitization may underlie the continuous pain component. Bilateral involvement is exceedingly rare, particularly in the context of craniosynostosis. Crouzon syndrome is a rare syndromic craniosynostosis caused by mutations in FGFR2 or FGFR3. Proposed mechanisms for trigeminal nerve involvement include skull base and posterior fossa abnormalities, hydrocephalus, intracranial hypertension, and vascular variants, all of which may lead to nerve distortion or compression.This case is notable for subsequent contralateral involvement of the second trigeminal branch, supported by MRI findings.

Case Report. A 30-year-old woman with Crouzon syndrome underwent right ventriculoperitoneal shunting for hydrocephalus at 6 months of age and a Le Fort III advancement osteotomy with external distraction at age 10 due to severe left visual impairment. Since 2019, she had experienced persistent right maxillary pain associated with gingival swelling and hyperemia in the setting of diffuse periodontal disease, impacted third molars, and prior maxillary fixation hardware. The pain was continuous, exacerbated by chewing and speaking, and partially responsive to pregabalin. In 2023, hardware removal led to a two-month remission. The patient first presented to our clinic in September 2024, when pregabalin was increased to 150 mg/day. In February 2026, she reported new pain involving the contralateral maxillary division; duloxetine 60 mg/day was added.Blink reflex testing was normal. Brain MRI showed ventricular asymmetry, possible aqueductal stenosis, marked posterior fossa hypoplasia, and severe narrowing of the prepontine cistern, where the trigeminal nerves were poorly visualized and partially indistinguishable from adjacent vessels, particularly the right superior cerebellar artery. Treatment was subsequently switched to carbamazepine, with only mild clinical benefit.

Conclusions. This case highlights the diagnostic complexity of facial pain in syndromic craniosynostosis. Although anatomical abnormalities in Crouzon syndrome may predispose to trigeminal neuralgia, bilateral involvement has not been previously reported.