

Bifid nose

A bifid nose is a rare malformation caused by failure of the medial nasal prominences to fuse during embryonic life. It is characterized by a nose divided into two halves. There is a large degree of variability, ranging from a small minimally noticeable groove to complete nasal bifidity.

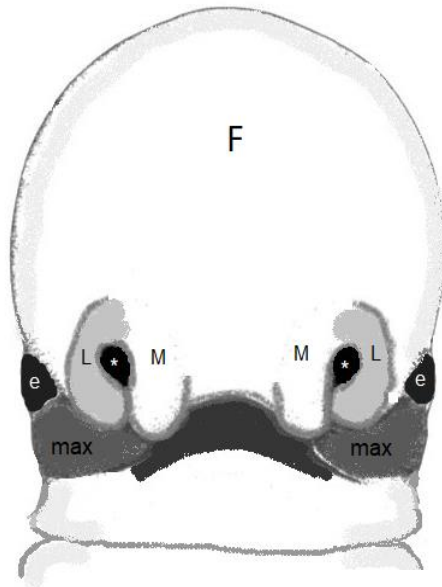
The bifid nose is part of a wide spectrum of genetic conditions with overlapping symptoms.



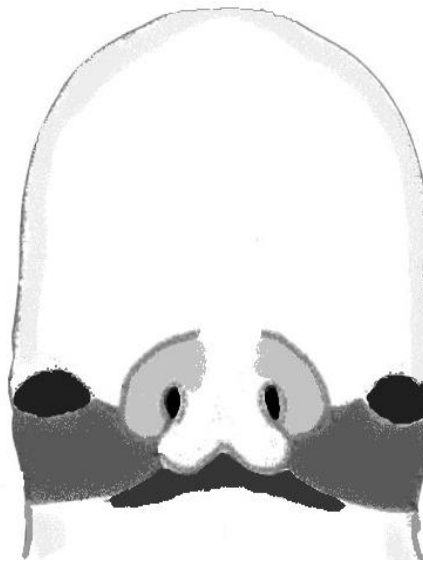
Nose-mouth view of a case with bifid nose.

Bifid nose Embryology

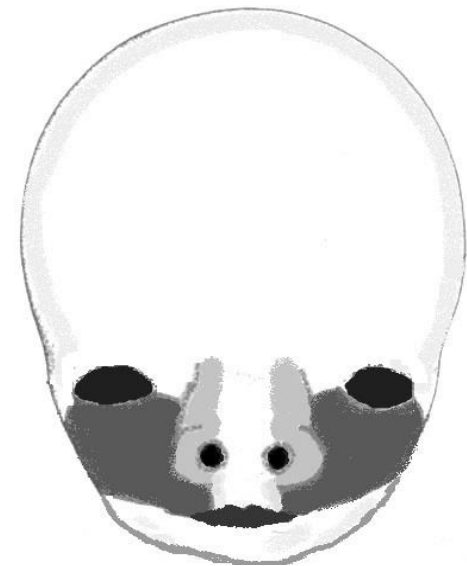
The formation of the nose starts with the nasal placodes (oval thickenings), which appear symmetrically on the frontal prominence by the end of six week gestation. The nasal pits (future nostrils) divide the placodes into medial and lateral prominences. In the seventh week of gestation growth towards the midline commences. The medial nasal prominences fuse in the midline to form the central part of the nose (crest and tip). The medial nasal prominences grow further downwards to form the philtrum and fuse with maxillary prominences to form the upper lip. The lateral nasal prominences form the lateral parts of the nose and alae nasi.



6 weeks



7 weeks



10 weeks

*F, frontal prominence; *, nasal pit; max, maxillary prominence; m, medial nasal prominence; l, lateral nasal prominence; e, eye.*

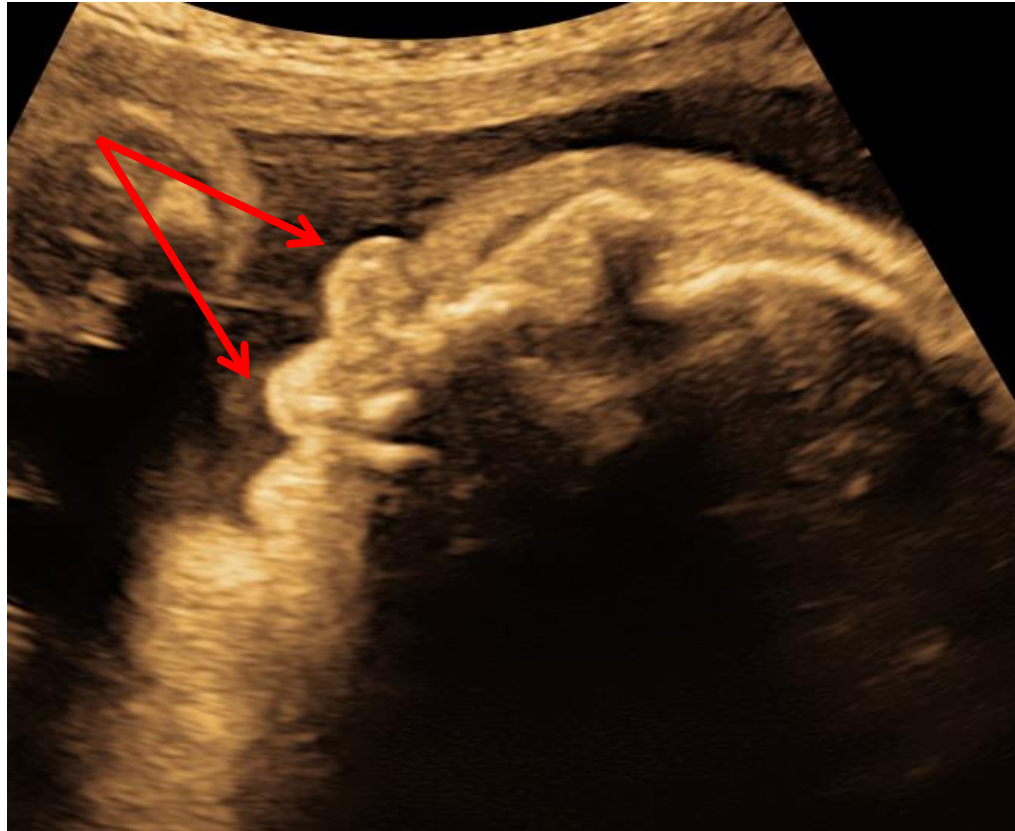
When there is a migration disorder towards the midline and an arrest in the upper facial development the eyes and nasal placodes maintain their lateral fetal positions resulting in a bifid nose and hypertelorism.

Bifid nose



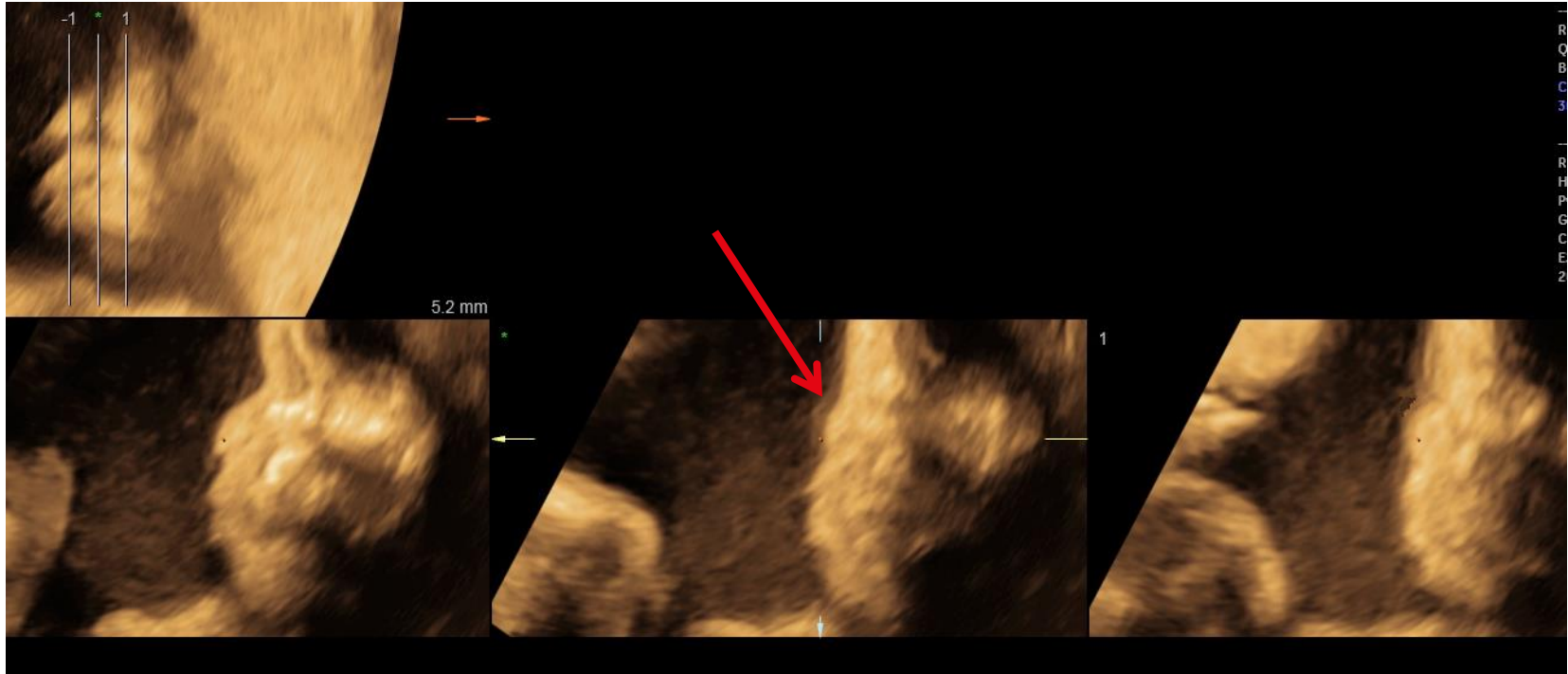
3D rendered image of a case with isolated bifid nose at 20 weeks of gestation.

Bifid nose



Axial view of a case with isolated bifid nose at 28.5 weeks of gestation.

Bifid nose



TUI of a case with isolated bifid nose at 28.5 weeks of gestation. Note that especially in the exact midsagittal view there is no protrusion of a nose.

Bifid nose



Image of a case with isolated bifid nose at 28.5 weeks of gestation.

Bifid nose



Image of a case with isolated bifid nose at 28.5 weeks of gestation.

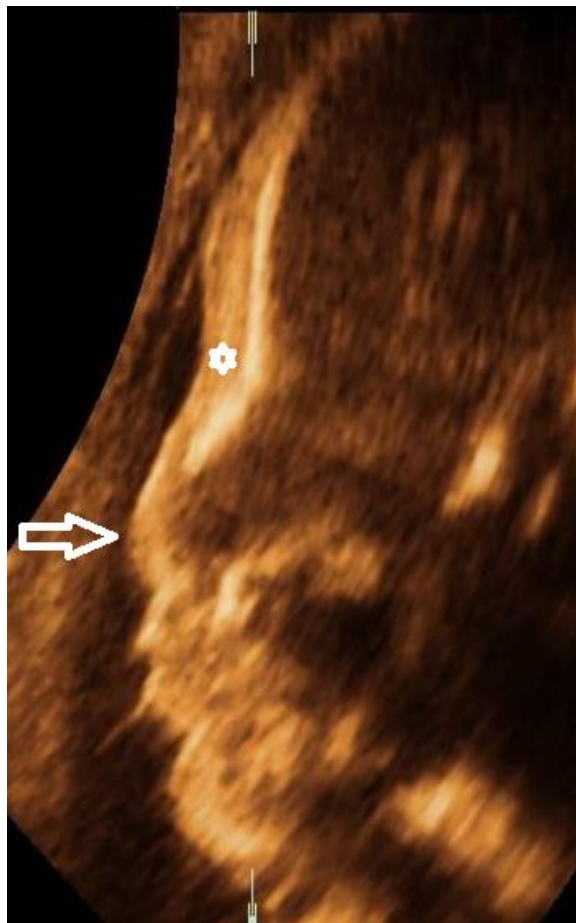
Bifid nose



Nose-mouth view of case with mild bifid nose. Arrow, dimple in tip of nose. Asterix, broad columella.

Third trimester case with mild bifid nose associated with borderline hypertelorism and septo-optic dysplasia.

Bifid nose



Profile view of a third trimester case with mild bifid nose. The nose has a flat appearance because the nasal tip is missing (arrow). Note that the nasofrontal angle is enlarged (asterix).

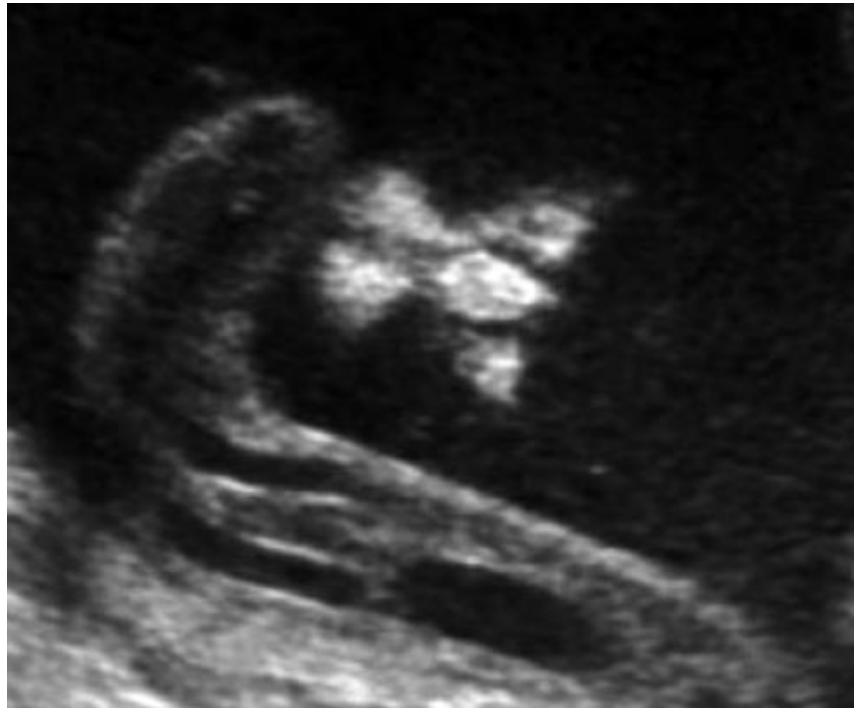
Bifid nose in Pai syndrome

Ultrasound Obstet Gynecol 2008; 32: 708–710

Published online 9 September 2008 in Wiley InterScience (www.interscience.wiley.com). DOI: 10.1002/uog.6150

Pericallosal lipoma associated with Pai syndrome: prenatal imaging findings

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Two-dimensional coronal ultrasound image of the fetal face showing a median bud of the upper lip, and a slight median indentation of the nose tip suggestive of a bifid nose.

Frontonasal malformation with unilateral cleft lip/palate

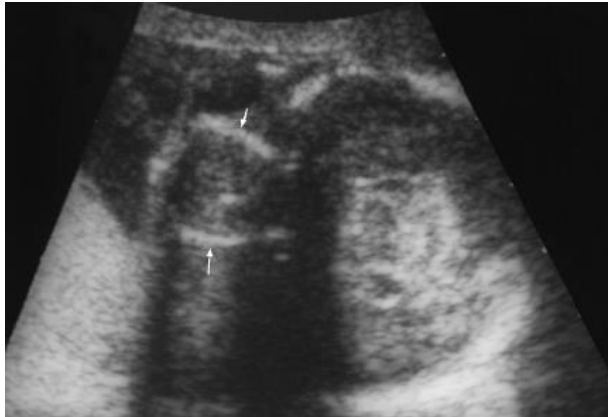
Ultrasound Obstet Gynecol 2002; 20: 290–293

Three-dimensional prenatal diagnosis of frontonasal malformation and unilateral cleft lip/palate

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Sagittal image of the head at 19.5 weeks of gestation demonstrating flattening of the nose.



Axial image of the head at 19.5 weeks of gestation at the level of the orbits demonstrating protrusion of the brain (arrows).



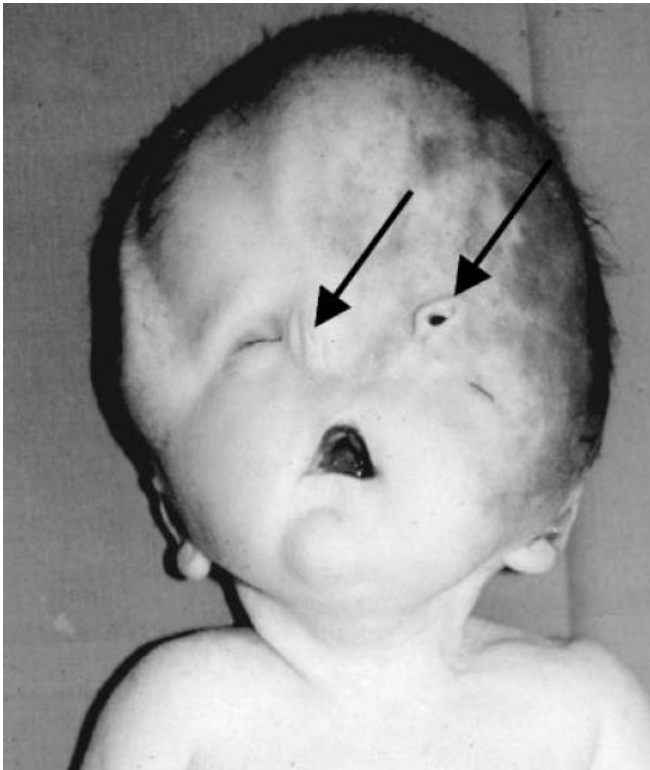
Three-dimensional surface reconstruction at 29 weeks of gestation demonstrating hypertelorism, unilateral cleft and broad flattened nose.

Frontonasal dysplasia in holoprosencephaly

Ultrasound Obstet Gynecol 2002; 19: 24–38

Brains and faces in holoprosencephaly: pre- and postnatal description of 30 cases

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Face of case with frontonasal dysplasia (lobair holoprosencephaly and hydrocephaly were present); the arrows point to the nostrils. There is hypertelorism.