

## Amniotic Band: A Case Report

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### Abstract

Amniotic bands are caused by tearing of amnion, which produces fiber like bands that may entrap the fetal parts in utero, a condition called Amniotic band syndrome (ABS). As the baby grows, the bands constrict or tighten, causing a reduction in blood supply and the extremities may develop abnormally or become amputated.

**Keywords:** Amniotic band syndrome; Ehler-Danlos Syndrome.

### Embryological basis

ABS is not a hereditary disorder. It most often happens spontaneously, but can also occur if the woman experiences trauma to lower abdomen, except in case of Ehler-Danlos Syndrome, a connective tissue disorder. The exact cause of amnion tearing is often unknown and there are no preventive measures.[1]

Origin of the bands may be from infection or toxic insults that involve either the fetus or fetal membranes, or both. They may represent adhesion between the amnion and of affected structures in the fetus.[2]

According to the Amniotic band theory ABS occurs due to partial rupture of amnion but this does not explain the high incidence cleft palate and other malformations occurring

together with ABS, this co-occurrence suggests an “intrinsic” defect of the blood circulation. [3]

### Case report

A full term male child born of non-consanguineous marriage with birth weight of 2.5 kg was delivered vaginally to a 24 yrs old primigravida at Civil Hospital attached to Dr. V. M. Govt. Medical College, Solapur. After birth, the baby was referred to department of Paediatrics to rule out any other associated malformations in view of malformed index finger. The mother did not have any antenatal history of drug intake or any other complications. On examination the neonate [Fig 1 and 2] had a constriction ring over the proximal part of right index finger, the distal part of the finger was normal. No other associated anomalies were found.

### Discussion

Amniotic banding affects approximately 1 in 1, 2000 live births. It is the cause of 178 in 10,000 miscarriages. Up to 50% of cases have other congenital anomalies including cleft lip, cleft palate, club foot deformity. Hand and finger anomalies occur in up to 80%. [3]

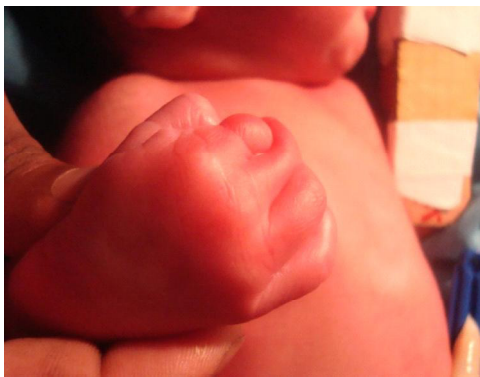
Other names for conditions include amniotic

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**Fig 1****Fig 2**

band disruption complex[4], streater dysplasia, congenital constriction bands or rings, amniotic deformity adhesions mutilations (ADAM)[1], pseudoainhum[3].

Sometimes ABS may cause limb-body wall complex (LBWC), where in addition to limb defects and craniofacial defects, exencephaly or encephalocele, anterior body wall defects such as omphalocele or gastroschisis are present.[5] The most severe cases occur if the band becomes wrapped around the head or umbilical cord, which can result in fetal death.[2]

ABS is often difficult to detect before birth as the individual strands are small and hard to see on the ultrasound. Usually the bands are detected indirectly because of constrictions and swelling upon limbs, digits etc. 3D ultrasound and MRI can be used for more detailed and accurate diagnosis and the resulting damage to fetus.[2]

Treatment usually occurs after birth, where plastic and reconstructive surgery is considered to treat the resulting deformity. Physical and occupational therapy may be needed in few cases. In rare cases fetal surgery is done to save a limb which is in danger of amputation or other deformity, known as amniotic band release surgery.[2]

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