



## ANZSA Frequently Asked Questions

### **Q. Did the cord cause my baby's death?**

Cord accidents are a relatively uncommon cause of stillbirth, thought to be around five percent in several study series. The cord can be compromised and cause the death of babies in several ways. The most obvious cases are those where there are twins contained within a single sac and have become entangled, although this is relatively uncommon.

Within singleton pregnancies the cord can be compromised in several ways. During or prior to delivery a loop of cord can prolapse (slip) through the cervix and therefore be subject to being squeezed. This tends to squash the vein first thereby preventing the blood returning from the placenta through the vein to the baby, stopping the baby's oxygen supply. This may be recognised by the obstetrician or midwife at delivery and produce CTG (baby monitoring) changes.

A second possible cause is where the cord becomes entangled around a part of the baby, often around the neck but sometimes an arm or a leg. In these cases, identifying this as a cause of death can be difficult. Babies are born with cords around the neck and the arm without being compromised, so it can be difficult to be certain whether it is entirely a cause of death. Changes in the placenta that can be seen under the microscope may indicate that the blood flow has been blocked and led to clotting. Without these changes it is difficult to be certain that the cord caused the baby's death, though it does not exclude it.

A third possible cause could be a knot in the cord, which can also cause the vein to be blocked first. In this case, examination would reveal changes in the cord, particularly of congestion and/or thrombosis to conclude that it was the cause of death. A loose knot may have been present during delivery and only pulled tight after delivery without affecting the baby. Knots are seen in well live babies from time to time. The pathologist sometimes has difficulty to know whether a knot has been made subsequent to the delivery.

A fourth cause could be an extremely long cord, approaching a metre in length, or with many twists to the cord, is also recognised now to be associated with compromise of the baby. This is probably due to the increased resistance caused by the cord and also the fact that long cords are more prone to becoming looped and entangled. In these situations as well, where there has been more chronic periods of cord problems, there may be changes also seen within the placenta, with clots in the placental villi (surface) or some of the placenta appearing rather swollen.

I am not an obstetrician, but identifying cord causes of death before the unborn baby is compromised is very difficult. It is sometimes clear in the twins in a single sac, but in other situations is very difficult. There has been a tendency in the past to probably oversubscribe causes of fetal death to cord accidents, but these days we tend to require more conclusive proof. Therefore there are probably other babies who die where the cord is involved but there are no other features to be able to make this conclusive.

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