

# Conjoined twins: the role of sonography

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## Abstract

This case report highlights the unfortunate consequences of doing a 'quick scan' in obstetrical scanning. It covers the important aspects to consider in particular when examining twin pregnancy.

## Key words

*Separating membrane, conjoined twins, dizygotic twins, monozygotic twins*

## Case report

A 24 year old pregnant patient presented to the ultrasound department of a regional hospital for a routine scan. The findings of the scan were of a twin pregnancy. Both fetal hearts seen. Gestational age of 28 weeks with cephalic presentation. There was one anterior placenta. Two weeks later the patient was again referred for an ultrasound scan as she complained of reduced foetal movements. A 'quick scan' was performed and foetal hearts were reported as being present.

At 34 weeks the patient presented to hospital in labor. During her labor she presented with complications and an episiotomy was performed. The delivery was not straight forward: the baby's head emerged followed by buttocks and legs followed by another head. The babies were ripped in the neck between the two heads and died in the process. Post-delivery examination showed conjoined twins with one body, two heads, two arms, two legs and vague genitalia (Figure 1). A post-mortem radiograph was performed and showed two spines with a single or fused pelvis as well as one heart and one stomach.

## Discussion

Twin pregnancy is associated with complications such as pre-eclampsia, 3rd trimester bleeding, risk of premature delivery and congenital abnormalities [1]. To the sonographer this means spending more than twice the time spent scanning a singleton foetus and also the pregnant patient visits the ultrasound department more often. Twins have a 5% greater chance of perinatal death than a singleton foetus [2]. Before ultrasound was discovered, 60% of twins were not diagnosed before delivery [1]. Now with this new technology, once diagnosed, a detailed scan specifically for fetal abnormalities must follow. Twins have a greater chance of having congenital abnormalities because of the way they are formed. Types of twins are:

- Dizygotic (fraternal) twins result from two separately fertilized eggs which implant separately in the uterus. Each one develops its own placenta and amniotic sac.
- Monozygotic (identical) twins are from a single fertilized egg. The ovum divides and results in two genetically identical fetuses.

Depending on the time frame, the following may result. If the ovum divides:

- One to three days post conception - two amnions and two chorions (diamniotic, dichorionic)
- Four to eight post conception - one chorion, two amniotic sacs (diamniotic, monochorionic)
- After eight days - two fetuses, one amniotic sac, one chorion (monoamniotic, monochorionic)
- After 13 days - division may be incomplete and conjoined twins result. The twins may be joined anywhere [2].

## Concluding remarks

There is no 'quick scan' when it comes to twin pregnancy or any other pregnancy. Once twins are diagnosed a thorough scan must be done to provide:

- number of gestation sacs
- presence/absence of separating
- number and location of placentas
- biometric data and foetal environment
- presentation/lie
- anomalies and associated abnormalities



Important for sonographers to note that with absence of a separating membrane one must always consider the possibility of conjoined twins. A separating membrane was not mentioned in scan findings in this case.

## References

1. Hagen- Ansert S. L. 2001, *Textbook of Diagnostic Ultrasound 5th ed.* Mosby, Inc. USA. p 688-690
2. Sanders R.C. 1991, *Clinical Sonography 2nd ed.* Little, Brown and Company, USA. p 125