

## What is hemivertebra?

Hemivertebra is a congenital (present from birth) anomaly of the spine in which only one half of the vertebral body develops. It occurs in about 3 in 10,000 births. It is a common cause of congenital scoliosis where the spine is curved sideways.

## How does hemivertebra happen?

Our spine is usually made up of 33 vertebrae stacked in a column. At about 6 weeks' gestational age, each vertebra has two areas at its sides where the bone develops and hardens, called lateral ossification centers. A hemivertebra results from the failure of one of these lateral centers to develop, so the vertebra is missing one side. The defective vertebra impacts on the configuration of the spinal column by acting as a wedge in the spine, leading to excessive lateral curvature (scoliosis), or too great a curve away from the side on which it is present.

## Should I have more tests done?

Tests to ask about include an amniocentesis to look for problems with the number of chromosomes and some underlying genetic conditions. Amniocentesis is a test where a needle is used to take some of the fluid surrounding the fetus in the womb. Other genetic tests may be offered, such as Chromosomal Microarray (CMA, or "chip") which looks more closely at the genetic make-up of the fetus, if this is available.

Because Hemivertebra has been described in association with various other anomalies (such as other abnormalities of the bones and muscles, including those of the spine, ribs, and limbs), you should also ask for a detailed ultrasound examination. Hemivertebra is also associated with congenital syndromes including Jarcho-Levin, Klippel-Fiel, Aicardi syndrome, and VACTERL association, so genetic counseling could be of benefit to you.

## What does it mean for my baby after it is born?

Left untreated, 25% of patients with congenital scoliosis show no progression, 50% progress slowly, and 25% progress rapidly during growth. The treatment for your baby is orthopaedic surgery (spinal fusion is the treatment of choice). This is usually performed before significant deformity occurs.

## Will it happen again?

This is uncertain, and depends whether a genetic cause was determined. There may be an increased risk of neural tube defects in siblings, but the risk would be low.

## What other questions should I ask?

- Is the Hemivertebra isolated or associated with other anomalies?
- Should I do a genetic test?
- How often will I have ultrasound examinations done?
- Is surgery after pregnancy available?
- Where should I deliver?
- Where will the baby receive the best care after it is born?
- Can I meet in advance the team of doctors that will be looking after my baby when it is born?

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