Sacrococcygeal teratoma (SCT)

Patient Information Series – What you should know, what you should ask.

What is a Sacrococcygeal Teratoma (SCT)?

A sacrococcygeal teratoma (SCT) is a tumour arising from the presacral area (located in the lower part of the back). SCT is an extremely rare finding that occurs in about 1 in 40,000 births. The female to male ratio is 4:1. It can be predominantly external with minimal presacral component or predominantly internal with a significant intrapelvic component.

How does a SCT happen?

SCT may arise from the totipotential cells (embryo cells that have the potential to develop into any kind of cell) of the Hensen's node (a knot of cells found at the very early stages of development) during embryo development. SCTs can be non-harmful tumours, immature teratomas (tumour), containing different proportion of embryonal tissues, or malignant (very infectious) teratomas. Mature and immature teratomas are frequently cystic, while malignant forms are predominantly solid with extensive blood vessel formation.

Prenatal series only rarely reported associated malformations, with the exception of hydrops (an accumulation of serous fluid in the fetus) and excess amniotic fluid, due to the increased cardiac output to feed the mass. The incidence of associated chromosomal anomalies is very low.

Should I have more tests done?

The tests available depend on where you are. Tests to ask about include an amniocentesis/chorionic villus sampling to look for problems with the number of chromosomes and some of the problems within the chromosomes, even if these are rarely associated with SCT. You should also ask if a fetal echocardiography, a specialised ultrasound of the baby's heart during the pregnancy, can be offered, in particular in cases with hydrops. If available, MRI can sometimes be performed to provide information on the condition of the baby.

What are the things to watch for during the pregnancy?

Babies with SCT are at risk of some problems during the pregnancy, in particular hydrops and heart failure due to the demand the mass places on the fetal heart. That is why most specialists will recommend regular ultrasound examination. The ultrasound will help to identify if the baby is going into heart failure.

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

The prognosis is related to three factors: the development of fetal hydrops, whether the teratoma is benign or malignant, and the size of the tumour. Hydrops is most frequently associated with perinatal death due to heart failure. Malignant tumours are almost invariably fatal and have a high probability of metastases, making removal impossible. The size of the tumour does not seem to predict malignancies, but is important as well, because very large lesions are associated

with a greater surgical risk. If the mass is predominantly external, cystic and lacking extensive blood vessels, the outcome is better, because the lesion is easier to remove.
Babies who also have a problem within the chromosomes may have additional problems after delivery. The prognosis in these cases depends on the type of problem that the baby has.

When the baby is stable, a surgeon will do one or many surgeries to remove the mass. The baby often requires very complex care in a specialized hospital for many weeks after birth.

Will it happen again?

When no other genetic reason is found to explain the SCT, the risk of this happening again is extremely low.

What other questions should I ask?

- Does this look like a malignant SCT?
- How big is the mass? Is it external or internal?
- Are there any sign of hydrops or cardiac failure?
- Is it possible to terminate the pregnancy?
- How often will I have ultrasound examinations done?
- Is surgery during the pregnancy available?
- Would my baby benefit from surgery inside the womb?
- Where and how should I deliver?
- Where will the baby receive the best care after delivery?
- Can I meet in advance the team of doctors that will be looking after my baby following delivery?

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