Hypoplasia or aplasia of the vermis in fetuses with crown-rump length between 45 and 84 mm

Department of Prenatal Medicine, Kepler University Hospital, Linz, Austria, Ambulatorium für Fetalmedizin Feldkirch, Austria, Linz, Austria

Objective
To detect hypoplasia/aplasia of the cerebellar vermis at the time of the first trimester screening (CRL 45 to 84 mm).

Methods
This was a prospective, observational study including 66 fetuses whose mothers attended our centres to check the elevated risk of their babies on the combined test. In all fetuses we acquired transvaginal three-dimensional volume blocks to assess the posterior fossa. Having done beforehand, a prospective, cross sectional study including 216 fetuses with normal fetal outcome to get valid normal values, we could distinguish between normal and pathologic structures of the posterior fossa on fetuses with CRL 45 to 84 mm.

Results
Calculating the structures of the posterior fossa of fetuses with genetic and/or sonographic disorders, we found 4 fetuses with a aplasia and 2 with hypoplasia of the cerebellar vermis.

Conclusion
Transvaginal three-dimensional sonography can detect hypoplasia/aplasia of the cerebellar vermis at the time of first trimester screening.