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## Ultrasound measurements of the neonatal ventricular system: A literature review

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Cranial ultrasound is an effective, non-ionizing and portable modality for the imaging of neonates. Measurements of the ventricular system using ultrasound help in the early and accurate diagnosis and monitoring of pathologies causing ventricular enlargement such as hydrocephalus, intracranial haemorrhage and congenital abnormalities. Several studies have established measurement techniques to evaluate the ventricles of neonates using 2D and 3D ultrasound. The objective of this systematic literature review is to verify whether an appropriate, consistent and reproducible method for measuring the ventricles using 2D and 3D ultrasound has been reported. Evaluation of articles fulfilling the inclusion criteria displayed that measurements with an identifiable landmark did not measure clinically relevant anatomy and that a limited number of studies have been rigorously completed in terms of sample size, inter- and intra- observer reliability and comparable statistical analysis.

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