OBJECTIVES: The association of tethered cord syndrome in closed spinal dysraphic (CSD) conditions is rarely reported prenatally as evaluation of the conus medullaris (CM) is not a part of routine ultrasound scan. The objective of the study was to evaluate the position of conus medullaris and the association of tethered cord syndrome (TCS) in cases with closed spinal dysraphism.

METHODS: In a midsagittal plane, the conus can be identified as a dark triangular structure with surrounding echogenic lines at the caudal end of the spinal cord. The diagnosis of TCS was made if the CM was seen lower than the L3-L4 levels after 18 weeks. The distance between the conus medullaris and the last ossified vertebral body the conus distance was also measured. 2D and 3D evaluation of spine was done in forty three cases of CSD which included both simple and complex dysraphic states of spine.

RESULTS: In 13 cases an abnormality in position of conus medullaris was observed. Two cases with complete sacral agenesis had an abnormally high abrupt ending of the cord at level of T12 itself. In the remaining 11 cases the CM could be consistently demonstrated below L3 level and the conus distance was substantially reduced. The level of CM could be easily documented with multiplanar imaging. The conus distance was below the fifth percentile in all these eleven cases and was an easier way of documenting the low lying conus.

CONCLUSIONS: The importance of evaluating the conus medullaris anatomy in closed spinal dysraphic conditions is highlighted as this has important prognostic implications. Measurement of the conus distance is a feasible way to assess the position of the conus medullaris. Early detection is not only important to inform and prepare parents for the anomaly but also to allow paediatric neurosurgeons to plan surgical repair.