Caudal Regression Syndrome
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Figure 1: Spine MRI: Sagittal T2-weighted MR images showing: (A) High and abrupt termination of the spinal cord with a blunt-ending conus medullaris, (B) Absent S3-S5 and coccygeal segments (arrow).

Clinical Image
We report the case of a 6-year-old girl, presenting with urinary and fecal incontinence. Spine MRI was performed showed high and abrupt termination of the spinal cord with a blunt-ending conus medullaris as well as absent S3-S5 and coccygeal segments. These findings are consistent with type 1 caudal regression syndrome. Caudal regression syndrome (CRS) is a rare congenital malformation resulting from abnormal development of the caudal part of the spinal cord and vertebral column [1]. It is thought to be associated with an insult that occurs during gastrulation and some teratogen factors were involved, such as maternal hyperglycemia, infections, toxic and ischemic causes [2]. Patients may present with a broad range of symptoms ranging from mild lower limb sensorimotor deficits and deformities to neurogenic bladder and anal sphincter disorders [3,4]. Prenatal ultrasound can help make diagnosis in the 2nd or 3rd trimester. It demonstrates abrupt termination of the spinal cord with high blunt-ending conus medullaris and sacrococcygeal dysgenesis. Fetal MRI can be useful in difficult cases. Ultrasound helps to access other associated malformations such as genitourinary and gastrointestinal anomalies [5]. MRI is the modality of choice for detailed evaluation as it allows a better assessment of spinal cord malformations, levels of vertebral agenesis and helps identify other dysgraphic dysplastic anomalies [5] (Figures 1 and 2).

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Figure 2: Axial T2-weighted MR image in the same patient showing left ureterohydronephrosis complicating neurogenic bladder (arrow)

CRS is divided into two board groups [6]:

- **Group 1:** the conus medullaris is abrupt and ends above the normal level, with associated vertebral aplasia in several grades of coccygeal, sacral, lumbar, and lower thoracic vertebrae.

- **Group 2:** the conus medullaris is elongated and ends below the normal level. It is tethered by a thickened filum terminal, intraspinal lipoma, terminal myelocystocele, or lipomyelomeningocele.

The treatment depends on the clinical presentation. Its main goal is to maintain, and improve renal, cardiac, pulmonary and GI function.

**Keywords:** Tetragon; Caudal regression syndrome

**Declaration of Interests**

The authors declare that they have no competing interests.

**References**


