Teaching NeuroImages:

Caudal regression syndrome

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Figure Plain radiograph and MRI

(A) Lateral radiograph of lumbosacral spine reveals absence of distal sacrum (arrow). (B) Sagittal T1-weighted turbo spin echo MRI reveals abrupt termination of the conus medullaris with double bundle arrangement of nerve roots (arrow). (C) Sagittal T1-weighted turbo spin echo MRI reveals abrupt termination of the conus medullaris (arrow) and partial sacral agenesis.

A 5-year-old boy, born to a diabetic mother, presented with dribbling of urine since birth. Plain radiograph and MRI confirmed the diagnosis of caudal regression syndrome (figure, A through C).

Caudal regression syndrome results from abnormal canalization and retrogressive differentiation of the caudal cell mass in the early stages of gestation (33–40 days). In about 15%–25% cases, history of maternal diabetes mellitus is present. It encompasses a wide range of anomalies including variable degree of sacral dysgenesis, genitourinary anomalies, cardiac diseases, tethered

cord, dermoid cyst, and diastematomyelia.¹ Imaging reveals either high and abrupt termination of conus (type 1) or low-lying tethered cord (type 2).

AUTHOR CONTRIBUTIONS

Dr. Sharma: study concept and design, drafting and revision of manuscript. Dr. Jana: study concept and design, drafting and revision of manuscript, guarantor of study.

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