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1 'Snake eye' appearance on a teenage girl with spontaneous spinal ischemia

2 A 17-year-old girl was admitted to our hospital with the complaints of sudden difficulty in
3 walking. On neurological examination, bilateral weakness and hypoesthesia of pain/temperature
4 sensation relative sparing of proprioception and vibratory sense below level of C4 were observed.
5 Laboratory examination was all unremarkable. On the second day of admission, she developed
6 bladder and bowel dysfunction. A magnetic resonance imaging of cervicothoracic spine was
7 performed. Axial T2-weighted images revealed the 'Snake eye' appearance in the anterior horn
8 of the spinal cord (Fig. 1A). Sagittal T2-weighted images demonstrated spinal cord
9 hyperintensity in the anterior part of the cervical and thoracal spine in multiple segments starting
10 from C4 level to T6 level (Fig. 1B). Diffusion weighted images (DWI) showed hyperintense
11 signal change consistent with diffusion restriction on cervicothoracic spine (Fig. 1C). No contrast
12 enhancement was observed after gadolinium administration. Computed tomography angiography
13 was normal. Sudden onset of symptoms, 'snake eye' appearance, anterior column involvement
14 and the restricted diffusion on DWI suggested the initial diagnosis of spontaneous spinal
15 ischemia. Anticoagulant therapy was started. Except bladder and bowel dysfunctions, symptoms
16 were all disappeared at 12 days of submission. After two months, all symptoms of patient
17 disappeared and neurological examination was completely normal.

18 Spontaneous spinal ischemia is an extremely rare condition in pediatric population with poor
19 prognosis. Early diagnosis is crucial for timely treatment which optimizes the outcome.

20 Figure Legend

21 **Fig. 1** (A) Axial T2 weighted image shows hyperintense 'Snake eye' appearance in the anterior
22 horn of the spinal cord (arrows). (B) Sagittal T2-weighted image shows multiple segments of
23 hyperintensity in the anterior part of cervical and thoracal spinal cord (arrowheads). (C) Sagittal

- 1 diffusion weighted image demonstrates high signal intensity in the spinal cord representing
- 2 restricted diffusion (arrowheads).

