History
2 month old noted to have hemangioma over midline lumbar region on well-child examination.

Diagnosis
Non-Accidental Trauma

Discussion
Spinal trauma in child abuse is unusual; the thoracolumbar junction is the spinal region most commonly involved in non-accidental trauma. The proposed mechanism of action is hyperflexion, axial loading and rotation; the fulcrum when the infant is grasped by the chest is the thoracolumbar junction.

Kleinman proposed 3 classes of injury at the thoracolumbar junction: Class I results in mild compression of vertebral centrum with intact endplate and subchondral bone, Class II produces a fracture of anterior cortex and injury of anterior-superior endplate, and Class III is a combination of Class I and II with continuum to fracture-dislocation.

Intraspinal blood may have several origins. Blood in the subarachnoid space can be circulated from anywhere in the neuroaxis; consequently this is not specific for spinal injury. Occasionally intracranial subdural blood can dissect into the upper spinal canal although this would not account for the blood in this case. The blood in this case is clearly intraspinal and extrathecal and almost certainly related to disruption of the lumbar epidural venous plexus.

Findings
US-Hypoechoic posterior epidural lumbosacral fluid collection with effacement of the thecal sac and cauda equina.
MR- Midline images demonstrate hyperintense T1 and hypointense T2 epidural collection. Right parasagittal IR image shows high signal within 2 adjacent ribs associated with periosteal and subpleural edema.
CR-Oblique image of the right ribs confirm the presence of healing fractures.

Reference

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