

Comment on: The value of post-operative MR in tethered cord: a review of 140 cases by P. David Halevi, Suhas Udayakumaran, Liat Ben-Sira, Shlomi Constantini

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In this paper, I believe the authors pointed to a very important aspect of tethered cord operations.

The main problem in this issue is, although neglected so far, the very important difference between radiological appearance, which is called “low lying conus,” and clinical picture which is called “tethered cord syndrome.” It could very easily be apprehended that tethered nervous tissue, namely conus medullaris or filum terminale, will not move upwards after the detethering procedure as a rubber band after staying in a position for years as a consequence of a developmental fault. I am sure that the scene of “anxious family comes to the physician because of the radiological report says the conus medullaris is still at the same level as an indicator of inadequate surgical intervention” would sound very familiar. All of the neurosurgeons are aware of the reality that patients improve in regard to their symptoms after surgical intervention. However, the so-called “low lying conus” still stays at its original level or might have moved cranially just a few millimeters or so.

This article gathers all midline developmental defects of nervous tissue in the same basket, as cord-tethering causes, which completely fit to the essence of the midline developmental defects. At a certain time of gestation, approximately the 55th day of pregnancy, the spinal vertebral column begins to grow at a faster rate as compared to the spinal cord.

At this time of pregnancy, it is known that both neurulation processes (appropriately or not) are completed. Should there be a wrong developmental process that took place during neurulation, tethering of the nervous tissue to surrounding elements at lower levels is inevitable. According to this explanation, all midline developmental defects regardless to their mechanism of formation cause neural tissue tethering and related symptoms.

Postoperative MR for tethered cord patients does not constitute a healthy baseline data for follow-up examinations. Instead, functional follow-up studies such as bladder and sphincter functions, pain, or patient's physical ability tests are much more helpful.

Postoperative MR may be done in a particular patient who indicates regression in neurological status of either bladder functions or physical abilities. At this point of follow-up, MR study not only may show the site of retethering of nervous tissue but also will contribute to the planning of the surgical intervention.

In our department, we follow our patients, if needed, with urodynamic studies and spinal somatosensory-evoked potentials. Should there be a decision of reexploration, then the MR study comes into consideration.

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