Response to Dr. Suhas Udayakumaran concerning the paper by Martínez-Lafe JF et al. 'Syringomyelia with quadriplegia in CSF shunt malfunction: a case illustration', *Child's Nervous System*, DOI 10.1007/s00381-010-1165-3

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Dear Editor,

We really appreciate the comments and questions brought about by Dr. Udayakumaran regarding our paper.

1. We have treated several cases of shunted hydrocephalus accompanied by central canal dilatation by simply revising the shunt. In all of them, the hydromyelia resolved after this procedure. The situation of the reported patient seemed more complex to us, given that apparently the valve was functioning appropriately. The ventricles were slightly dilated due to the increase in pressure of his externally adjustable valve, a maneuver that we undertook to prevent ventricular collapse.
2. We used the term "trapped fourth ventricle" to refer to a dilated ventricle as was evident in previous magnetic resonance (MR) studies performed to the patient. This isolated ventricular cavity most probably resulted from prior obstruction at the foramen magnum comprising the lateral foramina and the neighboring cerebellar tonsils from the one part, and from the other to functional kinking of the aqueduct. Dr. Udayakumaran is right in commenting that the patency of the central canal in anatomical communication with the fourth ventricle strictly contradicts the assertion of the existence of a *complete* block to CSF circulation.
3. The nature of the obstruction of CSF pathways at the foramen magnum was most probably related to adhesions

secondary to his posthemorrhagic hydrocephalus. Why these adhesions did not involve the entry of CSF to the central canal remains elusive. Perhaps, during the evolution of the patient's hydrocephalus, these adhesions, being weaker, might have broken by the pulsations from the fourth ventricle.

4. The most difficult issue for us was to suspect the origin of the quadriplegia and to perform the spinal MR, as the patient previously had a milder quadriplegia as a sequel of his intraventricular hemorrhage.
5. Regarding treatment we were not confident on performing an endoscopic third ventriculostomy due to the absorptive nature of the hydrocephalus together with his worsening condition that would not give us time to wait for the results of this procedure.

In addition, we would like to add a new reference that escaped to our bibliographic search and that was noted after submission and proofreading of our manuscript [1]. We apologize for not having included it in our text.

Reference

1. Peraud A, Grau S (2009) Decompensated hydrocephalus causing syringomyelia and tetraparesis: a case report. *Childs Nerv Syst* 25:263–266. doi:10.1007/s00381-010-1165-3

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