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LETTER TO THE EDITOR

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"Pseudo" idiopathic scoliosis in syringomyelia

In the Emery, Redondo und Rey review [1], titled "Syringomyelia and Arnold Chiari in scoliosis initially classified as idiopathic: experience with 25 patients", I believe the headline is ambiguous. According to the authors, "idiopathic scoliosis" fails to be idiopathic once syringomyelia or Arnold Chiari malformation has been detected. This view is not shared by most of the authors and is inconsistent with the views expressed in the accompanying discussion in the same article, namely: "the etiology of scoliosis associated with syringomyelia is still unknown". The term "pseudoidiopathic" is also confusing, referring to idiopathic scoliosis associated with neurological disorders.

In this case, I would refer to the interesting contribution made by Roth, who explains idiopathic scoliosis related to Chiari malformation as an attempt of the spinal column to minimize a sagittal traction, which in turn forces the cerebellar tonsils down. All of this is a consequence of a growing imbalance between the neuroaxis and neurorachis [2–4].

I agree with the authors that two types of scoliosis may be present in syringomyelia. The "paralytic" type occurs as a result of neurological impairment in severe syringomyelia. The second type is "idiopathic" scoliosis, which, like Roth [3], I believe is caused by the same mechanism as the syringomyelia associated with Chiari malformation: a medullar traction. The latter type always precedes syringomyelia [5–7].

According to my point of view, the "idiopathic" scoliosis and the scoliosis that is associated with syringomyelia/Chiari malformation are the same entity, since both represent the spinal column's attempt to ease a traction transmitted by a tight filum terminale syndrome. Chiari malformation would be a result of the traction exerted on the lower part of the cerebellum. Likewise, syringomyelia is due to centrospinal ischemia caused by the traction forces on the cervical spinal cord with a centripetal distribution of medullar vessels [8–10].

The main difference between the types of scoliosis is the lack of association with other neurological disorders that characterizes idiopathic scoliosis. As a result of its minimization, which is due to a variety of possible circumstances (i.e. range of medullar traction; presence of a little occipital hole, which makes the cerebellar tonsils passage difficult; or by the range of medullar elasticity related to age, which is adapted without ischemia to the traction) [8, 11], idiopathic scoliosis is not associated with other neurological disorders.

The fact that encouraging results have been obtained with mechanical liberation of the neuroaxis by performing a filum terminale resection [10] supports the hypothesis that the etiology of Chiari I/syringomyelia/scoliosis is medullar traction.

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