

## Commentary

The article by Dr Pedro Arqué and collaborators was published in 1964, when physicians diagnosed on the basis of patients' clinical symptoms and signs, without the advanced diagnostic systems that are available nowadays.

The article is written in a colloquial style, and is not adapted to current scientific requirements; as far as bibliographical references, much has changed; and obviously current assessment scores had not been developed, so that a reader nowadays finds it difficult to determine the degree of subjective and objective improvement achieved and after what time of follow-up.

As I see it, this study tries to assess 3 aspects: The clinical aspect of the then so-called "cervico-brachial syndrome", the surgical technique used for its correction in a group of 18 patients, and lastly to discuss the etiology of this syndrome. Let's analyze each point:

Dr. Arqué included in this cervico-brachial syndrome a whole group of symptoms, both neurological and vegetative. Subsequent studies have documented that it is possible to distinguish 3 large groups of clinical syndromes related to cervical spondylosis: Axial or cervical pain, cervical root nerve pain and cervical myelopathy<sup>1</sup>. Cervical pain, radiating to the neck and/or shoulders, but without nerve root irritation, is a highly prevalent syndrome in the general population and, although on occasion it is associated with vegetative symptoms (dizziness, nausea, etc.), the direct relationship with any organic vertebral pathological condition is not clear. It is more common to see these symptoms after cervical backlash syndrome<sup>2</sup> associated in many cases with psychological factors, which are not infrequent in these cases<sup>3</sup>. Cervical root pain is the syndrome caused by the irritation of 1 or more cervical nerve roots, generally due to cervical spondylosis or a disc hernia, with the resulting pain or sensitive and motor alterations in a certain dermatome. Cervical myelopathy is a secondary spinal dysfunction due to extrinsic compression of the cervical spine and its blood-supply caused by cervical spondylosis, and both upper (with signs of second neuron, atrophy and weakness) and lower (with signs of first neuron, spasticity, hyperreflexia and gait problems) limbs and even sphincter problems.

As to the surgical technique, described in detail, it is not very different to the one used currently<sup>4</sup>, although now we have more sophisticated resources available that prevent complications such as those described in the literature (although none were seen in this series) (graft mobilization, non-union, etc.). Furthermore, the currently used systems of cervical plates avoid the uncomfortable immobilization of patients with collars or spica bandages. However, anterior cervical arthrodesis continues to be the technique most used

for the treatment of cervical disc hernia and cervical myelopathy, with excellent results in well-chosen patients, and is a simple technique which allows us to see a postoperative patient, as described by Dr. Arqué, that has improved as if due to a magic wand.

As to the etiology, the article tries to explain the improvement seen in patients in relation to their previous clinical state. From this point of view, and lacking the knowledge we now have, Dr. Arqué proposes 2 factors to explain the results that are still accepted: on one hand the removal of compressive elements (disc and osteophytes) and on the other the limitation of mobility due to the arthrodesis which eliminates irritation of different structures.

Given the few image diagnostic methods then available, with the exception of X-rays, it was impossible to assess the involvement of the different elements (nerve roots, spine, vertebral arteries). Currently, both magnetic resonance (MR) and computerized tomography (CT) are essential in the diagnosis of cervical degenerative disorders. However, we must never forget to use a good X-ray study with dynamic X-rays, since cervical instability is one of the etiological factors seen in the 3 cervical syndromes mentioned above<sup>1,4,5</sup>, which, in part, may justify the improvement seen in some of the patients described by Dr. Arqué.

We currently recognize, as well as mechanical factors, the involvement of other pathogenic and pathophysiological factors related to cervical pain and nerve root irritation, such as pain and inflammation mediators (substance P, vasoactive intestinal peptide [VIP], etc.)<sup>6</sup>. Hypoxia, also mentioned in the paper, as well as the response to reduced spinal or nerve root blood supply resulting from the compression of the vessels that irrigate the spine or the roots, is another of the pathophysiological factors responsible for these syndromes.

The improvement of some of the symptoms and signs mentioned by Dr. Arqué (vertigo, nausea, etc.) has not been completely proven even nowadays, so we must not encourage patients to undergo surgery merely to resolve these problems. Currently, the indication of surgery for cervical pain is limited, and is restricted to those patients with proven instability and positive signs on MR or X-rays; and the results are comparable to those seen with conservative treatment<sup>7</sup>. With reference to cervical nerve root conditions, although a considerable number of patients adequately respond to conservative treatment, when this fails, surgical treatment in the form of arthrodesis has an excellent outcome. However, cervical myelopathy, when it is progressive, must be treated surgically, by anterior or posterior approach, according to a series of criteria which cannot be included in this paper<sup>1,4,5</sup>.

## REFERENCES

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**R. González Díaz**

*Spine Surgery Unit.  
Alcorcón Hospital Foundation.  
Madrid. Spain*