



## Revista Española de Cirugía Ortopédica y Traumatología

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### EDITORIAL

## The spinal column is not free of market laws. Arthrodesis with an autogenous graft continues to be the procedure-type<sup>☆</sup>

### El raquis no se libró de las leyes del mercado. La artrodesis con autoinjerto sigue siendo el procedimiento tipo

Vertebral arthrodesis, a more or less extensive fusion of 2 or more vertebrae, is a surgical procedure intended to immobilise a painful, deformed or unstable vertebral segment.<sup>1-3</sup> This change in spinal biomechanics produces collateral alterations, such as the degeneration of neighbouring spaces with recurrent pain. Therefore, alternatives to vertebral arthrodesis and also to the surgical procedure of arthrodesis itself have appeared in recent years, providing remarkable and accurate progress in immobilisation by osteosynthesis,<sup>1,2</sup> as well as alternatives to autograft as a method to stimulate bone fusion. However, these options are somewhat controversial and certainly not superior.<sup>1,2</sup> A good example that combines both proposals is the method of interbody cages, with variations in material composition, surgical path for placement and even filling. Nevertheless, far from representing a significant alternative to tricortical autograft, lines of research on the cages are still uncertain, without a clear approach to fine long-term results.<sup>1,2</sup> With or without cages, multiple procedures and biological substances have been described to stimulate fusion and improve the success rate achieved by autografts, basically aimed at avoiding the morbidity generated by their obtention.<sup>1-3</sup>

Recent literature shows that, as in other joints, arthroplasty is the natural alternative to arthrodesis. An exhaustive literature search in PubMed up to August 2012 produced more than 600 references on spinal arthroplasty results. However, a detailed analysis showed that, despite reporting it, very few were based on actual scientific evidence criteria, monitoring periods were very short and long-term results deteriorated over time. When attempting a stratification of variables we observed that seemingly benign results did not reveal which population group would

benefit from an arthroplasty.<sup>4-10</sup> Even complications such as heterotopic ossification showed disparate results.<sup>11-13</sup>

A recent article in the journal *Spine* pointed out that Internet publications showed a clearly commercial intention when referring to spinal arthroplasties.<sup>14</sup> Why should the spine be free of market forces? Undoubtedly, the use of surgical procedures in humans should be preceded by incontestable experimental evidence obtained from clinical trials in phases with well-designed groups and precise variables which allow an accurate control of biases and methodological errors to avoid invalid conclusions.

Until the therapeutic alternatives to spinal arthrodesis show an improvement of their results, this procedure will remain the main choice to achieve a significant and permanent improvement in patients afflicted with various spinal diseases. Its misuse is a different matter and, in these cases, poor results may be attributable to the surgeon rather than the procedure.<sup>15,16</sup> Current ethics consider that it is better to intervene than to remain expectant when patients suffer a disease. This often leads to procedures being performed and ending in failure, due to a wrong indication rather than to the nature of the procedure itself.

The teaching of appropriate diagnosis and treatment of spinal diseases is still a pending issue in Spain and worldwide. The results of a voluntary, final examination of young, Spanish, specialist physicians showed that the grades obtained and evaluated by experts in the spinal module were far from those achieved in the upper and lower limbs, reconstructive or trauma surgery, and even in paediatric pathology.<sup>17</sup> Some interesting proposals have already been published in our journal.<sup>18</sup> However, these must reach not only young physicians, but also experienced professionals who venture into performing techniques as soon as their first results are published by surgeons working as consultants serving industry. The deleterious results and major reoperations which may be suffered by patients require an ethical reformulation.

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