

New concepts in scoliosis treatment

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This special issue on spinal deformity in the European Spine Journal addresses some of the challenges the deformity community has been faced over the last two decades and gives some insight into the future directions. Obviously, it was not possible to give an exhaustive list of papers dealing with innovation in scoliosis management, as this would have required a whole textbook.

However, the editors of this supplement of the European Spine Journal are proud to present a well thought selection of key papers about contemporary scoliosis treatment in a special focus issue—in addition to quite a number of relevant peer-reviewed deformity and scoliosis papers published and clustered in the regular issues of the European Spine Journal throughout the year.

The European Spine Journal is not only the official Journal of EuroSpine—the Spine Society of Europe—but through that also of the European Spinal Deformity Society (ESDS), which has been merged already quite some years

ago with the SSE. In this sense, the European Spine Journal is also the leading European scientific publication about the pathology and treatment of scoliosis and deformities.

On the pediatric side, we have seen fantastic advances in the understanding of the etiology of scoliosis, the treatment of chest wall deformity along with congenital spine conditions. These advances have often been made possible thanks to the use of animal models. Keeping up with the growth of the child remains still one of the challenges to achieve, so we can have safer and simpler surgeries with fewer complications and no sequential operations.

Instrumentation for scoliosis has evolved to mostly pedicle screw instrumentation, however, one can wonder if the pedicle screw fixation rage has not gone too far and if we have not created some problems, as we have observed on the pediatric side with changes in the sagittal profile of our patients and some complications. A paper on anterior spine surgery is, therefore, here to show us that pedicle screw instrumentation is not the only treatment option for our pediatric deformities.

On the adult side, these new instrumentations have created junctional disorders, which are far from being resolved and represent the new challenges to overcome. There is an urgent need to better understand the whole pathobiology and pathomechanics of the adult deformity, specifically in elderly patients with concomitant diverse pathologies, as the number of patients with this pathology is rapidly increasing due to the aging of the society.

The role of the sagittal profile and new understanding on how pelvic parameters are determinant in our pediatric and adult patient has now gained wide acceptance.

Complex osteotomies in rigid spinal deformities have evolved, and once performed only by a few centers, these complex osteotomies gain more and more acceptance with their powerful correction.

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Minimal invasive surgery and spinal deformity seem to be like two opposite concepts; however, this may represent the future of some of the adult spinal deformity. Whether done as one of the steps of the reconstruction or for the whole procedure, and only for simple case, deserves discussion.

At last, all these new technologies and advances can only be accepted if we perform a thorough evaluation of their success, complications and outcomes. A review of all

the current outcome tools in scoliosis was necessary, so we are able to demonstrate our continuous improvement in treating such an ailment as scoliosis.

We wish the reader will take on these new issues to question himself or herself on where spinal deformities stand today and prepare them to face the new challenges ahead.

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