**Clinical: Innovations Non-Conventional**

7

**The Role of Minimally Invasive Spine Surgery in the Treatment of Degenerative Spine Pathologies - 5 Years Clinical Overview**

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**Objective:** Clinical 5 years overview on the role of minimally invasive spine surgery in the treatment of degenerative spine pathologies and its effect on standard spinal surgical procedures.

**Background:** Distinction is to be made between regular spine surgeries with minimally invasive access (MIASS) and the true minimally invasive spine surgeries (MISS). The first ones are regular spine surgeries like fusions, discectomies, laminectomies etc, where the access to the target of the surgery is been done in a minimally invasive way through smaller incisions and with less tissue destruction (example: endoscopic discectomy, percutaneous pedicle screws etc).

The second type or the true minimally invasive procedures are techniques that, independently of the access routes, use technologies, materials and intellectual properties whose aim is the treatment of the pathology in a radically different way (example: laser, RF, vertebroplasty, interspinous devices, etc).

**Materials and methods:** The Authors overviewed five years of surgical activity, i.e. 2400 surgical procedures for degenerative spine pathologies, by clinical file analysis and out-patient or telephone interviews. Of these, 55% were of the true minimally invasive type while the rest were regular spine surgeries of all types with both standard and minimally invasive accesses. The patients’ reported improvement with the true minimally invasive surgeries on year 1 and year 5 was respectively, 82% and 71% while the patients’ reported improvement with standard types of surgeries on year 1 and year 5 was, respectively, 94% and 82%.

**Results:** Even if the rate of success of the MISS procedures is, approximately, 10% lower than the one of the standard surgical procedures, the curious thing is that we never before have had such a high percent of satisfaction with the standard surgical procedures. What was found is that with the introduction of MISS the standard procedures were done exclusively when a strict combination of clinical and radiological indications did indicate the surgery and, in some cases too, only after the minimally invasive surgeries did fail to improve the clinical status. So, while the use of the minimally invasive procedures did reduce the total number of standard procedures by some 20-25%, it, absurdly, improved in a significant way their rate of success.

**Conclusions:** A possible explanation for this might come from the fact that while in the past the standard procedures have been performed frequently on patients with border-line indications, with the introduction of MISS, these patients were no more candidates for standard procedures but instead the MISS procedures coped well with them. And what was found further more is that border-line indication patients are those that benefit most from these techniques.