

Minimal Invasive Spine Surgery: An Affordable Technique

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Purpose

The benefits of MISS are well known but those are feasible if institutions/patients have the economic support to acquire the equipment. Our aim is to spread the benefits of MISS to those patients/countries where the expensive material is a limitation.

Methods.

We included 30 patients which underwent MISS using syringes as dilators and retractors for posterior lumbar approaches, the inclusion criteria were lumbar radicular/back pain, degenerative disc, spondylolysis, unilateral and maximum 2 spine levels affected. We analyzed the pathology, surgery, level affected, dilator diameter used, surgery time, hospital staying days and MacNab criteria score

Results.

Radicular pain of S1 was addressed in 56.6% (n=17), secondary from a posterolateral hernia in 70% (n=21) which required one-level discectomy; 20% (n=6) patients required discectomy + IPS device and 3.33% (n=1) underwent two-levels discectomy.

All the surgeries were performed using syringes as dilators and retractors, 20ml syringes (2cm diameter) was the maximal diameter used in 96.6% (n=29) and 60ml syringe (3cm diameter) was used in 1 patient, surgery time was 1.5 hrs, hospital staying was 1.8 days, complications were in 16.7% (n=6) which 10% (n=3) was wound dehiscence and 6.7% (n=2) transitory pain. MacNab criteria scored excellent outcome in 83.3% (n=25), good in 10% (n=3) and fair in 6.7% (n=2)

Conclusion.

MISS using the barrel syringes is a feasible technique that obtains excellent results according to MacNab criteria at low cost. This technique could represent a surgical option for selected lumbar spine pathologies in developing countries.