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**Patient Satisfaction Following Lumbar DSS Surgery (Dynamic Spine Stabilization System, Paradigm Spine)**

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**Objective:** To evaluate the satisfaction of patients who were surgically treated with Dynamic Stabilisation System (DSS) for lumbar degenerative disorders at our unit.
**Summary of background data:** Various forms of lumbar instability require surgical stabilization. As an alternative to fusion, a mobile, dynamic stabilization restricting segmental motion would be advantageous in various indications, allowing greater physiological function and reducing the inherent disadvantages of rigid instrumentation and fusion.

The DSS system is a pedicle-screw based, implantable dynamic spine stabilization system indicated for degenerative disc disease of the lumbar spine. The range of motion is controlled by a combined spring and damper unit allowing approximately 50% range of motion in flexion and extension. The system allows controlled dynamic stabilisation while allowing control of rotation and the modularity allows combination of fusion and dynamic stabilisation.

**Method:** 28 consecutive patients underwent DSS fixation from July 2008 to July 2010 in our spine unit by one consultant surgeon (IMS).

The patient group consisted of 17 females and 11 males with an age range of 36 to 86 years.

The range of follow-up period is 3 - 27 months. Indications for surgery were lumbar canal stenosis, grade I or II spondylolythesis and degenerative lumbar disc disease.

25 patients had single level DSS fixation, two had 2 levels and one had 3 level fixation. 16 patients had decompression with DSS alone *(group A*) and 12 had hybrid DSS and posterior lumbar interbody fusion *(group B).* The patient satisfaction scored according to the Odom criteria. The scoring was carried out by the author who was not involved in the surgery.

Pre operative scores were collated of Visual Analogue Scale, Oswestry Disability Index and Centre for epidemiology studies- depression scale. Follow-up scores continue to be collated.

**Results:** At one year follow up, results of 23 cases according to Odom criteria showed 9 cases to be rated excellent (39%), 7 good (31%), 4 fair (17%) and 3 poor (13%).

Overall results of the 28 patient at their last visit showed that 10 cases (36%) were categorized as excellent, 8 (29%)good ,6 (21%) fair and 4 (14%) poor.

Looking at the two groups the outcomes are: Group A; 7 cases rated excellent (44%), 2 good (12%), 4 fair (25%) and poor 3 (19%). Group B; 3 cases scored excellent (25%), 6 good (50%), 3 fair (25%) with no poor results.

We had no implant or screw related failures.

**Conclusion:** Early data indicates that there were improvements in outcomes of majority of patients who underwent DSS surgery. Majority had improved after surgery by one year and those who had been followed up for two years have maintained the same level of their Odom scoring. Overall 86% were satisfied with the surgical outcome at their last visit.

DSS is a new, safe, reliable device and gives promising results in patient satisfaction at this early stage. Early results are encouraging and more research is required in this field.