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Evaluation of lumbar interbody fusion using cages

Thesis

Submitted for partial fulfillment of
M.D. Degree in Orthopaedics

By

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Acknowledgement

First and foremost thanks to **God**, The most Beneficent and Merciful.

I would like to express my deepest gratitude to **Prof. Mohamed Ahmed Maziad**, Professor of Orthopaedic Surgery, Ain Shams University to whom I owe very much, for planning and supervising this work, for his constructive criticism, and for his close valuable guidance all through this work.

I would like to express my deepest gratitude and appreciation to **Prof. Sameh Ahmed Shalaby**, Professor of Orthopaedic Surgery, Ain Shames University for giving me so much attention and time.

I am much obliged to **Prof. Mohamed Sadek Elsokkary**, Professor of Orthopadic Surgery, Ain Shams University for his faithful and sincere advise, much support and for helpful suggestions.

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Introduction

Spinal fusion is a popular management option in the management of degenerative disc disease. Posterior, posterolateral and interbody fusions both anterior and posterior have been successfully used alone or in combinations. The addition of instrumentation has improved success rates in many series.

Interbody fusions have long been shown to achieve solidity in a high percentage of cases. Fusion material placed inside the center of segmental motion is in the best location permanently to arrest motion, create a solid fusion, and obliterate the degenerated nucleus.

Because any movement within the developing bone or fibrous tissue ingrowth can interfere with fusion development, the rate and quality of fusions can be improved both by rigid stabilization and protection of the bones being fused.

Interbody fusion techniques using cages are beginning to take a prominent place among other major techniques for lumbar fusion.

Cages are said to offer distinct biomechanical advantages. They provide initial distraction and support axial load, thereby eliminating the need for structural support provided by bone graft. Cages also provide initial segmental stability by tensioning the ligamentous apparatus.¹⁸¹

In the last decade several vertebral interbody cages of different designs were developed for the use with either an anterior or posterior approach.

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Aim of the work

The aim of this work is to assess the role of anterior lumbar interbody fusion using SynCage supplemented with transfacetal fixation with Magerl's screws in patients with discogenic back pain depending on finding the anatomic source of pain and the pathologic mechanism involved.

