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THE ROLE OF MRI IN DIAGNOSIS OF FAILED BACK SURGERY SYNDROME F.B.S.S.

Submitted in Partial Fulfillment of MD Degree in Radiodiagnosis

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(۳) بعد فحص الرسالة بواسطة كل عضو منفردا وكتابة تقارير منفردة لكل منهم إنعقدت اللجنة مُجْتِمعة فيسبى بكلية الطب – جامعة القاهرة وذلك لمناقشة الطالب في جلسة علنية في موضوع الرسالة والنتــــائج التــــى توصل إليها وكذلك الأسس العلمية التي قام عليها البحث. قلت الحدة الرسال المالة معرفة عامات لطالب من كافت مختيات وتناصل لمراس بمنضن نقاط your or which my constitutions of the توقيعات أعضاء اللجنة :_: الممتحن الداخلي الممتعن الخارجي د. وحمير مرسين طرار ر المشرف الممتحن د بمراهلوب / NSORIA

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Abbreviations

LBP: Low back pain.

LS: Left sciatica.

RS: Right sciatica

BS: Bilateral sciatica.

LDP: Lumbar disc prolapse.

LSCS: Lateral spinal canal stenosis.

D : Day.

W : Week.

M : Male.

F : Female.

M : Month.

Y : Year.

INTRODUCTION AND AIM OF WORK

Persistent or recurrent symptoms following spinal surgery has become known as the failed back surgery syndrome (FBSS). This term includes a variety of clinical neurological symptoms following disc surgery, caused by a variety of pathological changes in the lumbar spine alone or in a various combinations (*Tratting*, 1990).

The causes of failure in operative treatment of lumbar disc lesions are many, but the most common causes are: recurrent disc herniation, post operative scarring, spinal canal stenosis and intersegmental loosening (*Djukic et al., 1992*).

The failed post operative back represents a major clinical problem for both the patient and health care system.

Persistent low back pain after surgery can be a severe diagnostic and therapeutic problem (*Djukic et al., 1992*).

The diagnostic evaluation of patients representing with FBSS is a major challenge to both radiologist and surgeons. Clinical assessment is difficult since the physical signs and sensory symptoms are frequently non specific.

Electromyography, selective nerve roots blocks and discography have all been used in evaluation of FBSS with only moderate success. Routine X ray and myelographic differentiation between herniation and scarring is difficult or rather impossible.

High resolution computed tomography (CT) has shown some results in the evaluation of postoperative patients, but the role in epidural fibrosis in FBSS is not clear (Cervellini et al., 1988).

CT scans without contrast enhancement may be sufficient to guide the surgeon in post operative patients with massive signs as symptoms of recurrent root compression in whom a second operation is indicated on clinical grounds. In all other cases, myelography followed by CT scans is considered appropriate to investigate FBSS (Heilbronner et al., 1991).

CT of the lumbar spine and specially IU iodine contrast enhanced CT led to dramatic expression in the understanding and knowledge of normal and pathologic spinal anatomy and it represents a major improvement in the diagnosis of the disease.

Today, MRI is establishing itself as the modality of choice for imaging the postoperative spine. In addition to being noninvasive, MRI offers multiplaner capability, superior soft tissue contrast resolution and excellent tissue characterisation.

Most recently, Gadolinium-diethylene, trimene, penctate (D.T.P.A) enhanced MRI of the spine combined with non contrast MRI has shown therefore unparalleled sensitivity and accuracy in post operative spine (*Djukic et al., 1990*).

AIM OF THE WORK

The aim of the work will be, to evaluate the role of MRI in diagnosis of FBSS and figuring out its different causes. Also, to compare the MRI findings in these cases with the other diagnostic modalities such as CT and myelography.

Review