بسم الله الرحمن الرحيم

MONA MAGHRABY

شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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شبكة المعلومات الجامعية

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Posterior Approach Alone Versus Combined Anterior and Posterior Approach in Surgical Management of Dorsal or Lumbar Pyogenic Spondylodiscitis: A Systematic Review and Meta-analysis

Submitted for partial fulfillment of Master Degree in Orthopedic surgery

By

Mohamed Ibrahim Mohamed Fouda

M.B.B.Ch, Faculty of Medicine - Ain Shams University

Supervised by

Asst. Prof. Dr. Ahmed Mohamed Morsi

Assistant Professor of orthopedic surgery

Faculty of Medicine – Ain Shams University

Dr. Mohamed Ali Ibrahim

Lecturer of orthopedic surgery

Faculty of Medicine – Ain Shams University

Faculty of Medicine

Ain Shams University

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قالوا

سبحانك لا علم لنا
إلا ما علمتنا إنك أنت
العليم الحكيم

صدق الله العظيم

سورة البقرة الآية: ٣٢

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Mohamed Ibrahim fouda

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Abb.	Full term
AF	Annulus Fibrosus
CEMRI	Contrast-Enhanced MRI
CI	Confidence Interval
CMA	Comprehensive Meta-Analysis
CRP	C-Reactive Protein
CT	Computed Tomography
DVT	Deep Vein Thrombosis
ESR	Erythrocyte Sedimentation Rate
HIV	Human Immunodeficiency Virus
IV	Intravenous
IVD	Intervertebral disc
LMWH	Low Molecular Weight Heparin
MRI	Magnetic Resonance Imaging
MRSA	Methicillin-Resistant Staphylococcus Aureus.
NP	Nucleus Pulposus
PE	Pulmonary Embolism
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-analyses
PSD	Pyogenic Spondylodiscitis
SEA	Spinal Epidural Abscess

Abb.	Full term
SPECT	Single-Photon Emission CT
VAS	Visual Analogue Scale
WBC	White Blood Cell
18-FDG-PET	18F-FluoroDeoxyglucose-Positron Emission Tomography
99mTc	Technetium-99m

INTRODUCTION

Pyogenic spondylodiscitis (PSD) is defined as an infection of the intervertebral disc(s) and/or adjacent portion of vertebrae. [1]

A PSD remains a real challenge despite the recent advances in early diagnosis and treatment strategies. The goals of treatment are to eradicate the infection, safeguard neurological function and halt the occurrence or progression of deformity. There is neither a uniform orthopedic classification system nor a treatment algorithm to guide its management. This could be the reason behind over-treatment or under-treatment resulting in increased postoperative complications and increased costs burden to the health economic system. [2]

The diagnosis of PSD requires a high index of clinical suspicion combined with the early microbiological and radiological investigation. Early diagnosis is important as spondylodiscitis may be associated with abscess formation in the epidural space and adjacent soft tissues and muscle. The effects of local inflammation and abscess formation can lead to spinal cord compression or bone destruction, resulting in permanent neurological deficits. [1]

The majority of patients with spondylodiscitis can be treated non-surgically with antibiotics, bracing and immobilization if diagnosed early before bone destruction. (3)

However, in some cases, surgery must be performed to prevent neurologic disability, stabilize the destroyed unstable spinal segment, correct deformity, eradicate the infection, or even to establish a diagnosis through microbiological or histological analysis. ***(4)***

There is a broad range of options for the surgical management of spinal infections, which include anterior approach alone, posterior approach alone, or even combined approach, single-stage or two-stage surgery, with or without instrumentation. ***(5)***

The anterior approach is adopted by many surgeons because it allows the direct access to the infected focus and is highly convenient for debriding infection and reconstructing stability. *The posterior approach* is convenient for drainage of abscesses and instrumentation of posterior implants. Sometimes a combined approach may be required depending on the surgical goal that the surgeons want to accomplish. ***(6)***

The choice of approach depends on several factors, such as the level of the disease in the spine, the extent of the lesion, and the need of spinal reconstruction or stabilization.***(7)***