Pedicle based osteotomy in the treatment of the thoracic and lumbar kyphotic deformities

Thesis
Submitted for partial fulfillment of M.D degree in orthopedic surgery

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الشق العظمى لعنق الفقرات لعلاج الحداب الفقارى الصدرى و القطنى

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بسم الله الرحمن الرحيم

سنريهم آياتنا في الآفاق و في أنفسهم حتي يتبين لهم أنه الحق

صدق الله العظيم

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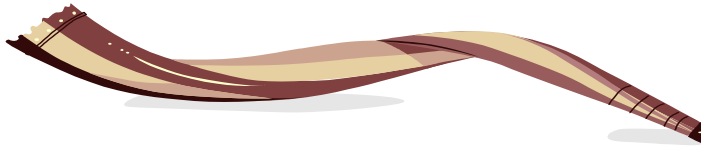

Zakaria Hassan

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Abbreviation	Explanation
ALL	Anterior longitudinal ligament.
AP	Antroposterior.
AS	Ankylosing spondylitis
C7T	C7 tilt.
CK	Congenital kyphosis
CSL	Central sacral line.
FSU	Functional Spinal Unit.
HRL	Horizontal reference line.
IAR	Instantaneous axis of rotation.
LL	Lumbar lordosis.
ODI	Oswestry disability index.
PI	Pelvic incidence.
PLK	Postlaminectomy kyphosis
PLL	Posterior longitudinal ligament.
PPSO	Partial pedicle subtraction osteotomy.
PSO	Pedicle subtraction osteotomy.
PT	Pelvic tilt.
PTK	Posttraumatic kyphosis
SPO	Smith-Petersen osteotomy.
SS	Sacral slope.
SSA	Spino-sacral angle.
SVA	Sagittal vertical axis
TK	Thoracic kyphosis.
VAS	Visual analogue scale.
VB	Vertebral body.
VCR	Vertebral Column Resection.
VRL	Vertical reference line.

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INTRODUCTION & AIM OF THE WORK

Aim of the work

This is a prospective study aiming to evaluate the efficacy of Pedicle based osteotomy in the treatment of kyphotic deformities in the thoracic and lumbar vertebrae and to illustrate its advantages and disadvantages.

Inclusion criteria:

1. Age group: 6-60 years.
2. Sex: both sexes.
3. Sagittal imbalance >10 to 12 cm.
4. Ankylosing spondylitis.
5. Posttraumatic kyphosis.
6. Congenital kyphosis.
7. Patients with postlaminectomy sagittal imbalance.

Exclusion criteria:

1. Psychiatric disease.
2. Active infection.
3. Osteoporosis.
4. Poor family or social support.

Patients and methods

Patients:

A prospective study will be conducted in Ain Shams University Hospitals including twenty patients with kyphotic deformities. Patients will be managed by pedicle based osteotomy.

Inclusion criteria:

8. Age group: all age groups.
9. Sex: both sexes.
10. Sagittal imbalance >10 to 12 cm.
11. Ankylosing spondylitis.
12. Posttraumatic kyphosis.
13. Congenital kyphosis.
14. Patients with postlaminectomy sagittal imbalance.

Exclusion criteria:

5. Psychiatric disease.
6. Active infection.
7. Osteoporosis.
8. Poor family or social support.