

# SHORT STEM FEMORAL COMPONENT IN PRIMARY HIP ARTHROPLASTY

Thesis

Submitted for Partial Fulfillment of MD  
in Orthopedics

By

***Dr. Adel Sayed Abdel-Ghani***  
*(M.B., B.CH. M.Sc)*

Supervised by

**Prof. Tarek Abdel-Shafy**

*Professor of Orthopedic Surgery  
Faculty of Medicine  
Cairo University*

**Prof. Abdel-Salam Abdel-Ghaffar**

*Professor of Orthopedic Surgery  
Faculty of Medicine  
Cairo University*

**Prof. Ahmad Morrah**

*Professor of orthopedic surgery  
Faculty of Medicine  
Cairo University*

Faculty of Medicine - Cairo University  
2015

## ACKNOWLEDGEMENTS

*First and foremost, I feel always deeply indebted to **Allah**, the Most Gracious and the Most Merciful.*

*I wish to express my deepest thanks, gratitude and profound respect to my honored professor, **Prof. Tarek Abdel-Shafy**, Professor of Orthopaedic Surgery, Cairo University, for his meticulous supervision. I consider myself fortunate to work with him. His constant encouragement and constructive guidance were of paramount importance for the initiation, progress and completion of this work.*

*No words can describe the effort and help of **Prof. Abdel-Salam Abdel-Ghaffar**, Professor of Orthopaedic Surgery, Cairo University, for his great support, facilities, careful supervision and continuous advice and guidance which were the cornerstone for this work.*

*I am deeply grateful for **Prof. Ahmad Morrah**, Professor of Orthopaedic Surgery, Cairo University, for his valuable help and guidance.*

*Finally, I want to dedicate this work to all the members of my family because of their patience and support.*

***Adel Sayed Abdel-Ghani***

## Abstract

Redistribution of bone mass from the proximal to more distal zones reported in conventional stems reflecting distal load transfer to diaphyseal area. While increased bone density was observed in the proximal periprosthetic area in the short stem design. Factors affecting bone remodeling after THA, include patient-related factors such as sex, age, underlying disease and quality of bone before the hip replacement, and also implant-related factors such as size, stiffness, surface finish and postoperative implant stability. Short stem hip arthroplasty is a reliable procedure resulting in excellent implant fixation and a predictable clinical outcome in the short term. This study have shown low rates of mechanical failure in a series of relatively young and active patients, but long-term outcome assessments are required to determine whether this type of fixation will stand the test of time.

Keyword:( BMD-THA-DEXA- Co-Cr-BMMA)

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# List of Abbreviations

Abb.	Meaning
BMC.....	Bone mineral content
BMD .....	Bone Mineral Density
BMI .....	Body Mass Index
Co-Cr.....	Cobalt chromium
DEXA.....	Dual Energy X-ray Absorptiometry
DVT .....	Deep Venous Thrombosis
FEA .....	Finite Element Analysis
HA .....	Hydroxyapatite
HHS.....	Harris Hip Score
HO .....	Heterotopic ossification
LLD.....	Limb Length Discrepancy
PMMA .....	Polymethylmethacrylate
PCA .....	Patient controlled analgesia
ROI .....	Region of Interest
THA .....	Total hip arthroplasty
THR.....	Total hip replacement
Ti .....	Titanium
UCLA .....	University of California, Los Angeles activity scale