

# **PREVENTION OF INFECTION IN TOTAL JOINT ARTHROPLASTY FOCUSING ON THE ROLE OF ANTIBIOTICS IN ARTHROPLASTY**

*An Essay*

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Orthopaedic Surgery*

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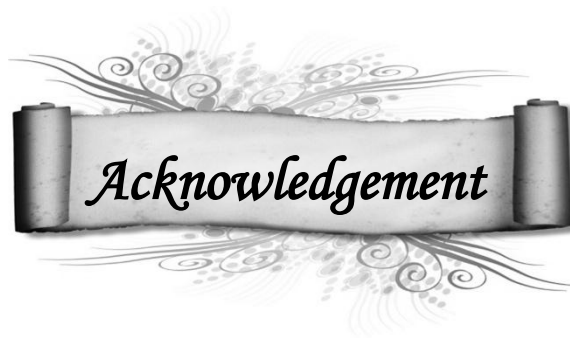
بسم الله الرحمن الرحيم

"مَنْ لَكَ فَضْلُ اللَّهِ  
يُؤْتِيهِ مِنْ بَشَاءٍ وَاللَّهُ  
مِنْ فَضْلِ الْعَظِيمِ"

صدق الله العظيم

(سورة الجمعة آية ٤)





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# List of Abbreviations

AAOS	American Academy of orthopedic Surgeons
ALBC	Antibiotic Loaded Bone Cerment
AUC	Area under concentration curve
BFS	Body fat share
BMI	Body mass index
CA-MRSA	Community-acquired MRSA
CDC	Centre for disease control and prevention
CFU	Colony forming units
C <sub>max</sub>	Maximum concentration
CoNS	Coagulase negative S.aureus
CPK	Creatine phosphokinase
CRP	C reactive protein
DMARDs	Disease modifying antireumatic drugs
DNA	Deoxyribonucleic acid
ESBL	Extended spectrum beta lactamase
ESR	Erythrocyte sedimentation rate
G6PD	Glucose-6-phosphate dehydrogenase
GBS	Group B streptococcus
GNRs	Gram-negative rods
h	Hour
HA-MRSA	Health care acquired MRSA
HIV	Human Immunodeficiency virus
IgG	Immunoglobulin G
IV	Intra venous
KNS	Coagulase negative S.aureus
KPC	Klebsiella pneumoniae carbapenemase
M. chelonae	Mycobacterium chelonae
M. fortuitum	Mycobacterium fortuitum
MAC	Mycobacterium avium intracellulare
MIC	Minimum inhibitory concentration

## List of Abbreviations (Cont.)

MRSA	Methicillin-resistant <i>Staphylococcus aureus</i>
MRSE	Methicillin-resistant <i>Staphylococcus epideridis</i>
MSSA	Methicillin susceptible <i>Staphylococcus aureus</i>
MTB	<i>Mycobacterium tuberculosis</i>
NSAIDs	Non steroidal anti-inflammatory drugs
OR	Operating room
<i>P. acnes</i>	<i>Propionibacterium acnes</i>
<i>P. acnes</i>	<i>Propionibacterium acnes</i>
PBP	Protein binding penicillin
PCR	Polymerase chain reaction
PJI	Prosthetic joint infection
PMMA	Polymethylmethacrylate
PMN	Polymorph neutophils
PsAR	<i>Pseudomonas aeruginosa</i>
RA	Rheumatoid Arthritis
RNA	Ribonucleic acid
<i>S. aureus</i>	<i>Staphylococcus aureus</i>
<i>S. hominis</i>	<i>Staphylococcus hominis</i>
<i>S. typhimurium</i>	<i>Salmonella typhimurium</i>
SCV	Small colony variants
SSI	Surgical site infection
T	Time
THR	Total hip replacement
TKR	Total knee replacement
U.S FDA	United States Food and drug administration Agency
USA	United states of America
UV	Ultraviolet

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# Introduction

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