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بالرسالة صفحات لم ترد بالأصل

Study the Results of Antibiotic Prophylactic Protocol Adopted by Ain Shams University Hospitals for reducing the Risk of Surgical Site Infection in Patients undergoing Hip Arthroplasty Pilot Study

Thesis

Submitted for Partial Fulfillment of
Master Degree in ***Orthopedic Surgery***

By

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Ahmed Mohamed Farrage

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List of Abbreviations

Abb.	Full term
AAOS	*American Academy of Orthopedic Surgeons*
AVN	*A vascular necrosis*
DMARDs	*Disease-modifying anti-rheumatic drugs*
CDC	*Centers for Disease Control*
CoNS	*Coagulase negative staphylococci*
DM	*Diabetes mellitus*
HTN	*Hypertension*
ITF	*Intertrochanteric femur fracture*
IV	*Intravenous*
MS	*Multiple sclerosis*
NOF	*Neck of femur fracture*
OA	*Osteoarthritis*
OPC	*Outpatient clinic*
OR	*Operation room*
PJI	*Periprosthetic joint infection*
RA	*Rheumatoid Arthritis*
S. aureus	*Staphylococcus Aureus*
MRSA	*Methicillin Resistant Staphylococcus Aureus*
SLE	*Systemic lupus erythromatosis*
SSI	*Surgical site infections*
THA	*Total Hip Arthroplasty*
TJA	*Total Joint Arthroplasty*

INTRODUCTION

Total hip arthroplasties are well-proven solutions in case of end-stage osteoarthritis of the hip joint[1]. Although, presence of complications can be devastating for the patient, especially periprosthetic joint infection (PJI) [2]. To prevent PJI, antibiotic prophylaxis regimens are regularly used [3].

Since the introduction of systemic antibiotic prophylaxis in hip arthroplasty the percentage of infection complications has decreased to 1-2% of these arthroplasty patients [4]. A major part of PJI is caused by Staphylococcus species, particularly Staphylococcus (S.) aureus and coagulase negative staphylococci (CoNS)[2]. Generally these bacteria are susceptible to cephalosporins such as cefazolin or cefuroxime [5].

The numbers of yearly performed Total Hip Arthroplasty (THA) are expected to increase[6]. Therefore, the absolute number of infection complications will likely increase as well, even when the percentage of infections can be limited further. Evidence based guidelines for the treatment of PJI is needed to face this challenge [7].

A worldwide consensus meeting concerning prevention, diagnosis and treatment of periprosthetic joint infections held in 2018 suggested that A first or second-generation cephalosporin should be administered for routine perioperative surgical prophylaxis because of its broad spectrum of action, cost-

effectiveness, and the need to preserve newer and more expensive therapies for drug-resistant microorganisms and emerging pathogens. These antibiotics cover gram-positive organisms and clinically important aerobic gram-negative bacilli and anaerobic gram positive organism[8].

The American Academy of Orthopedic Surgeons (AAOS) recommendations for the use of Intravenous (IV) antibiotic prophylaxis in primary Total Joint Arthroplasty (TJA) that the "duration of prophylactic antibiotic administration should not exceed the 24-hour postoperative period. Prophylactic antibiotics should be discontinued within 24 hours of the end of surgery[8].

Our Ain Shams university hospitals adopted a post-operative antibiotic protocol for patient with hip arthroplasty surgeries which include induction with first-generation cephalosporin antibiotic (zinol) before skin incision for 30 to 60 minutes and for 24 hours postoperative to all patient with primary hip arthroplasty except for high risk group use antibiotics (Dalacin and Tavanic) for 48 hours post-operative.

Then change dressing after 48 hours and discharge patient from hospital.

Follow up patient in outpatient clinic after 2 weeks and if there is discharge or wound soaking, take wound culture and give patient antibiotic according to wound culture and sensitivity.