

Preventing Periprosthetic Joint Infection by Extending Antibiotic Regime

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Received: April 18, 2023; **Published:** April 25, 2023

DOI: 10.31080/ecor.2023.14.01017

The Periprosthetic Joint Infection (PJI) is one of the difficult and complex problems for a surgeon. There are many factors involved such as - Surgical and host factors. In both primary total hip and total knee replacement surgery the risk of infection is there. While surgical factors are modifiable to an extent, whereas the host factors which do pre exist is more difficult to manage. Extended oral antibiotic prophylaxis if given after primary total knee and total hip replacement surgery in patients with BMI ≥ 40 kg/m² (morbid obese) possibility of reducing the rate of early periprosthetic joint infection can be seen.

Total joint replacement surgery the risk and cost of periprosthetic joint infection (PJI) management is upon surgeons and hospitals, so many a times few centers avoid treating high-risk patients. So, the studies show that optimization of host factors is very much necessary preoperatively to decrease PJI, and also as mentioned previously the recent literature supports using extended antibiotic prophylaxis.

Extended postoperative antibiotic prophylaxis following replacement surgery led to significant reduction in the 90-day infection rate of few patients who were at high risk for infection. There is a need for further study to adopt a protocol involving extended oral antibiotic prophylaxis after high-risk patients, with the benefits weighed appropriately against potential adverse consequences such as increasing the development of antimicrobial resistance [1].

Another study shows extended antibiotic prophylaxis for 7 days if given there was clinically meaningful reduction in 1-year infection rates of patients who are at high risk for infection. To say PJI rate in high-risk patients who received antibiotics was less when compared to the low-risk patients. So, this extended oral antibiotic prophylaxis method could be game changer to effectively counteract poor host factors. Further study is needed with a multicenter randomized control trial (RCT) to further validate this protocol [2].

Bibliography

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Volume 14 Issue 5 May 2023

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