

PENANG PROTOCOL : STANDARDIZED WASH OUT REGIME FOR INFECTED ARTHROPLASTY

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Introduction: Infected arthroplasty is a nightmare for all arthroplasty surgeon. Arthrotomy wash out is needed for both infected knee and hip prosthesis. However till date, no specific universal protocol has been developed for washout regime. Success rates of open debridement and component retention are inconsistent and vary greatly among authors 1. This study is to test efficacy of Penang protocol (PP) as washout regime for infected arthroplasty.

Methodology: Prior to 2014 in HPP, arthrotomy washout techniques are surgeon dependent. Most believe dilution is key to eliminate infection. In year 2014 , HPP arthroplasty team standardised a novel protocol for all infected arthroplasty cases-washout with 3L NS using lavage gun, soaking of joint with povidone iodine for 5 minutes , followed by another 3L NS using lavage gun, H2O2 wash and lastly washout using 3L of NS. This retrospective study done in HPP involves 98 cases, old regime(n=46), and Penang Protocol(n=52). Efficacy of the protocol is determined by the requirement of another arthrotomy washout within 6 months from the first washout. * HPP = Hospital Pulau Pinang .

Results: Overall , total cases (n=98) were included in the study, of which old regime (n=46), success rate is 56.53%. Using the Penang Protocol (n=52) , success rate is 80.77%. P-value calculated using chisquare test is significant (0.09). 50% of the old regime patients eventually had their second stage revision while in Penang Protocol arm, 59.61% had their second stage revision.

Conclusion: Dilution is believed to be key to eliminate infection. However, significant reduction of infection rate can even be achieved using less solutions provided that a specific protocol is used, emphasising a standardised technique for joint washout is most important. Penang Protocol is a simple yet efficient standardized regime for infected arthroplasty.