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QUESTION 3: Should modular components be exchanged during irrigation and debridement (I&D) of acute shoulder periprosthetic joint infection (PJI)?

RECOMMENDATION: Whilst there is logic in exchanging non-fixed modular components, such as the bearing surfaces, to allow thorough I&D of the entire effective joint space and removal of as much biofilm as possible, there is insufficient literature to provide clear guidance.

LEVEL OF EVIDENCE: Limited

DELEGATE VOTE: Agree: 100%, Disagree: 0%, Abstain: 0% (Unanimous, Strongest Consensus)

RATIONALE

A thorough search of the PubMed database for manuscripts addressing the exchange of modular parts during shoulder I&D for acute PJI was undertaken. Five papers were found that recorded if modular components were exchanged [1-5], totalling 53 patients. The pooled infection-free survivorship was 65% in the “modular exchange group” (19/29) versus 58% (14/24) in the “no exchange group” ($p = 0.77$ Fisher’s exact test).

Of these papers, three [1,3,5] specified the outcome for patients with acute debridement and retention with and without modular exchange. In total, 10 patients underwent acute debridement and retention of prosthesis without modular exchange with an infection free survivorship of 70% (7/10). Eight patients are recorded as having undergone poly exchange during debridement of an acute infection, with an infection free survivorship of 62.5% (5/8; $p > 0.05$).

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QUESTION 4: Should modular components be exchanged during irrigation and debridement (I&D) of subacute or chronic shoulder periprosthetic joint infection (PJI)?

RECOMMENDATION: We defer to the response for the Question 5: “Should well-fixed glenoid components be removed during surgical treatment for subacute or chronic shoulder PJI?”

It would seem that the recommendation, although of limited strength, would be for well-fixed components to be removed during surgical intervention for subacute/chronic shoulder PJI. Therefore, it can be extrapolated that modular components, which can be exchanged to remove biofilm with far less morbidity than well-fixed components, should likewise be either exchanged or removed and replaced with an antibiotic spacer.

LEVEL OF EVIDENCE: No Evidence

DELEGATE VOTE: Agree: 95%, Disagree: 5%, Abstain: 0% (Unanimous, Strongest Consensus)

