

THE DOSE OF ANTIBIOTICS IN CEMENT HAS POSITIVE EFFECTS ON TREATING INFECTED TKA

Hwa-Chang LIU¹, Wen-Chi TSAI², Tzil-Shang Thomas LIU³, Shier-Chieg HWANG², Pokai TSENG²

¹*Department of Orthopaedic Surgery, National Taiwan University Hospital, Taipei (TAIWAN)*, ²*National Taiwan University Hospital, Taipei (TAIWAN)*, ³*Department of Orthopaedic Surgery, Pittsburgh University Medical Center, Taipei (TAIWAN)*

Among 279 patients admitted to university medical center for treatment of infected total knee arthroplasty (TKA), from October 1993 to September 2006, 50 patients were treated with removal of the prosthesis, debridement, filling the space with cement beads loaded with different doses of antibiotics, replacement with a new set of prosthesis which was fixed with cement loaded with different doses of antibiotics and followed-up for more than 1 year. The present study is aimed to investigate the effects of the different doses of antibiotics loaded in cement on (1) the time needed to obtain normalization of c-reactive protein level (CRP) and (2) on the recurrence after revision of the infected TKA. The etiology of primary surgery were osteoarthritis (44 patients), rheumatoid arthritis (4 patients), and post-traumatic arthritis (2 patients). Definition of infection were positive cultures, or negative culture but with increased level of CRP plus clinical signs of sinus discharge, or swelling, redness, local heat and pain and positive x-ray findings. Follow-up studies included physical examinations, CRP measurement, and x-ray study. It is found that the higher the dose of antibiotics loaded in cement, the shorter the time was to normalize CRP level after debridement. The higher dose of antibiotics loaded in cement also reduced more the recurrences of infection after revision TKA.