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Use of intraoperatively made antibiotic eluting hinged PMMA spacer in a two-stage procedure for management of joint space infections - An efficient and a cost-effective solution

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Control of joint space infections still remains a huge problem in modern-day Orthopedics, with estimated incidence of 2-10 cases per 100,000. The incidence appears to be increasing, due to aging population, use of immunosuppressive therapies, increase in periprosthetic joint space infections and resistance to antibiotics. Apart from causing a lot of morbidity, it creates a lot of psychosocial and economic burden on the patient

The use of an antibiotic cemented spacer in the first stage of a two-stage revision procedure has been described in many different articles. In recent years, there has been a development of commercially available partial weight-bearing prosthesis which acts as an antibiotic eluting spacer in the first stage, however, these implants are costly, and are usually out of reach of the general population in developing countries.

Here in our series, we present a novel technique where we utilize components of an Ilizarov set to create hinged spacers intraoperatively for control of infection in septic arthritis.

Over a period of 21 months, we performed this procedure on 6 patients, with a mean age of 62.1 years. The spacer was retained in-vivo for a mean of (2.23 months), followed by a total joint replacement in the second stage. On completion of the two staged procedure, there was a significant improvement in VAS scoring from an initial (7.2) to (2.4) final stage. The average cost of the entire two stage procedure regime was significantly cheap as compared to commercially available antibiotic eluting spacers.

We saw from this study that an intraoperatively created hinged spacer is a novel and a cost-effective technique which gives comparable results to commercially available readymade spacers.

Biography

Prarthan C Amin who is currently completing his final year of residency in Orthopedics in a tertiary care hospital in India. He has always believed that the key to best patient care is through innovation, integration and quality control. At the age of 25 being one of the youngest final year residents, he has been involved in various research projects alongside daily academic and technical interactions. Working in an institute where there is an inflow of at least 300-400 underprivileged orthopedic patients daily, he strongly believes that revolution begins at a grassroot level. In the future, he aims to work on chronic orthopedic problems like osteomyelitis and septic arthritis, which not only remains a huge problem in modern day Orthopedics but a big psychosocial and economic burden. His future goal is to expertise in revision joint arthroplasty.

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