

Shockwave treatment for resistant bacterial infections- experience with two challenging cases

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Serious infections should be extremely rare in the well run orthopaedic unit. Implant surgery is normally covered with prophylactic antibiotics. If infection does occur, staged treatment with radical surgical excision of infected material is normally recommended. Any implants need to be removed together with infected fibrous tissue to reduce the chance of residual glycoalyx. Antibiotic impregnated beads and bone grafts will help to eradicate the problem in the vast majority of cases.

Occasional patients are unsuitable for surgery or may reject the surgical option.

We reported two challenging patients treated with shockwave treatment with a good initial result eradicating chronic infection.

Patient 1:

A female patient D.O.B 08/06/1958, an Afrocarribean patient from Grenada presented in 1995 with a tumour of her left knee. A biopsy confirmed a chondrosarcoma. A massive tumour prosthesis was inserted after resection of the distal femur. Twelve years later there is no sign of tumour recurrence.

This patient was working as a nurse. At the age of thirty she noted increasing headaches, nausea and dizziness and was found to be suffering from severe hypertension secondary to chronic renal disease. The patient has now been treated with dialysis for 9 years. In 2001 she developed a chronic infection in her prosthesis affecting the tibial component with three sinuses discharging from the anterior aspect of the tibia. It was thought that implant exchange would be difficult to arrange without a substantial risk of amputation. This patient has now been considered for renal transplantation but the relevant team will not consider her for such surgery in the presence of chronic sepsis.

This patient has had four sessions of shockwave treatment combined with sinography on two occasions. At the present time the sinuses have now healed and the wounds are dry for the first time for five years.

Patient 2:

A patient with ankylosing spondylitis presented in 1990. He required bilateral total hip joint replacement. He made satisfactory progress from this operative procedure but ultimately required a major revision surgical procedure to his right hip with a long stem implant.

He has also suffered from gross lymphoedema of both legs with chronic low grade superficial infections. In April 2005 he stumbled and suffered a periprosthetic fracture below the left total hip joint replacement. Major revision surgery was performed with the insertion of a Huckstep cross screwed intramedullary component. The patient subsequently developed superficial soft tissue inflammation with a low grade cellulitis and infection. He required antibiotic treatment but developed a major metabolic disturbance with renal failure requiring peritoneal dialysis. A bacteraemia occurred and led to an infection of his right total hip. He developed a fluctuant abscess and more than 500m1 of pus were aspirated from the wound on two occasions. His general condition precluded major revision surgery. He was treated with 5 sessions of shockwave treatment to the lateral aspect of the right thigh. The deep abscess fibrosed and the infection resolved and has not recurred two years later.