



The Bone Infection Unit, Nuffield Orthopaedic Centre, Oxford, UK

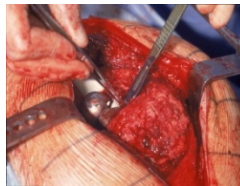
Host to the annual Oxford Bone Infection Conference (OBIC) and to the European Bone & Joint Infection Society 35th Annual Meeting in Sept 2016



The **Nuffield Orthopaedic Centre (NOC)** is a specialist orthopaedic hospital and part of the Oxford University Hospitals (OUH) NHS trust. The **Bone Infection Unit (BIU)** at the NOC is dedicated to the investigation and treatment of all aspects of bone and joint infection, including chronic long-bone osteomyelitis, diabetic foot infections, spinal infections and orthopaedic device-related infection. The centre of activity of the unit is a 24-bed dedicated inpatient ward. Each patient is under the combined care of a consultant infection physician (and trainees) and a specialist orthopaedic surgeon (and trainees). Plastic surgeons are often involved. There is a multi-disciplinary team (MDT) that includes a tissue viability nurse, Ilizarov nurse, dietician, occupational therapists, physiotherapists and home iv nurses. There is a large outpatient parenteral antibiotic therapy (OPAT) programme. The BIU runs consultant ward rounds, multidisciplinary team (MDT) meetings, radiology MDT meetings, a weekly combined orthopaedic / infection / plastics outpatient clinic and an OPAT clinic. There is close liaison with infection control.

Guidelines: The unit is involved with national and international guidelines on the diagnosis and management of bone and joint infections (including IDSA, NICE)

The unit is integrated closely with the OUH departments of adult and paediatric infectious diseases and microbiology. This offers additional opportunities to attend weekly educational seminars with invited speakers; combined case conferences; medical and surgical grand rounds; ward rounds on the inpatient infectious diseases ward; microbiology rounds (including intensive care, transplant, and general clinical consults); and HIV, Infectious diseases, Rheumatology and Hepatitis clinics.

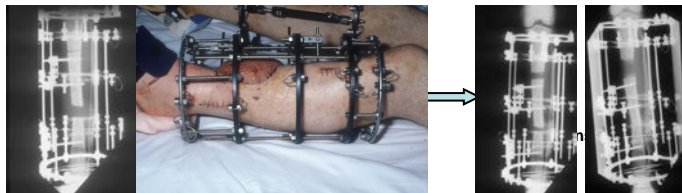


Multiple intra-operative sampling using separate instruments

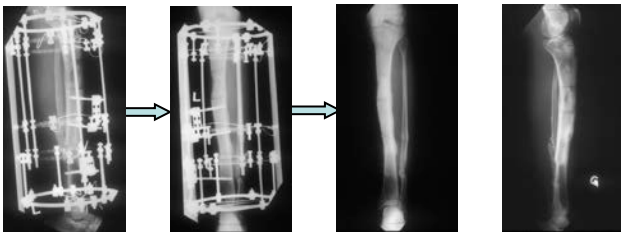


Meetings & Education : There are regular ward-based medical student and observer attachments. The unit presents the Oxford Bone infection Conference (**OBIC**) each year for microbiologists / ID physicians , orthopaedic and plastic surgeons, and nursing and allied health staff.

See www.obic.org.uk & www.hartleytaylor.co.uk for more details. **Research agenda:** There is an active clinical research group. The BIU is leading a multi-centre randomised controlled trial of oral versus intravenous antibiotics (OVIVA). We have described outcomes after debridement and retention or 2-stage revision, the outcomes after stopping long-term antibiotics and the microbiology of prosthetic joint infection and chronic osteomyelitis.



Osteomyelitis: Segmental resection, muscle flap. ilizarov bone transport



Union and consolidation

Frame off



Prosthetic Joint Infections



Diabetic Foot Infections



Spinal Infections

Selected Recent Publications

Minassian A, Atkins BL, Byren I, McNally M, Stubbs D, Ramsden A, Berendt A. Pubic Osteomyelitis following radiation osteonecrosis: a chronic complex and co-morbid series. Accepted by J.Urology Jan 2015.

Jernison T, McNally M, Pandit H. Prevention of infection in external fixator pin sites. Acta Biomater. 2014 Feb;10(2):595-603.

Ferguson JY, Sutherland M, Pandit HG, McNally M. The rate of symptomatic venous thromboembolism in patients undergoing elective ilizarov surgery and the cost of chemical prophylaxis. Bone Joint J. 2014 Mar;96 B(3):426-30.

Matthews PC(1), Chue AL, Wylie D, Barnett A, Isikbaye T, Jefferies L, Lovering A, Scarborough M. Increased teicoplanin doses are associated with improved serum levels but not drug toxicity J Infect. 2014 Jan;68(1):43-9.

Barrett L, Atkins BL. The clinical presentation of prosthetic joint infection. Journal of Antimicrobial Chemotherapy 2014 69 (9): 125-127

Minassian AM, Newnham R, Kalimeris E, Bejon P, Atkins BL, Bowler IC-JW. Use of an automated blood culture system (BD BACTECTM) for diagnosis of prosthetic joint infections: easy and fast. BMC Infectious Diseases.2014, 14:233

Ferguson JY, Dudareva, M, Riley ND, Stubbs D, Atkins BL, McNally MA. The use of a biodegradable antibiotic-loaded calcium sulphate carrier containing tobramycin for the treatment of chronic osteomyelitis. Bone Joint J 2014; 96-B: 829-836.

Kugan R, Aslam N, Bose D, McNally MA. Outcome of arthrodesis of the hindfoot as a salvage procedure for complex ankle pathology using the ilizarov technique. Bone Joint J 2013; 95-B: 371-7.

Choa R, Gundle R, Critchley P, Giele H. Successful management of recalcitrant infection related to total hip replacement using pedicled rectus femoris or vastus lateralis muscle flaps. J Bone Joint Surg Br. 2011 Jun;93(6):751-4.

Ali AM, McMaster JM, Atkins BL, Cogswell LK. Stressing the need for rapid referral of complex open fractures to a specialist centre. Letter in Annals of The Royal College of Surgeons of England. August 2011

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Hughes HC, Newnham R, Athanasius N, Atkins BL, Bejon P, Bowler IC. Microbiological diagnosis of prosthetic joint infections: a prospective evaluation of four bacterial culture media in the routine laboratory. Clin Microbiol Infect. 2011 Oct;17(10):1528-30

Bejon P, Byren I, Atkins BL, Scarborough M, Woodhouse A, McLardy-Smith P, Gundle R, Berendt AR. Serial measurement of the C-reactive protein is a poor predictor of treatment outcome in prosthetic joint infection. J Antimicrob Chemother. 2011 Jul;66(7):1590-3. Epub 2011 May 11.

Bejon P, Berendt A, Atkins BL, Green N, Parry H, Masters S, McLardy-Smith P, Gundle R, Byren I. Two-stage revision for prosthetic joint infection: predictors of outcome and the role of reimplantation microbiology. J Antimicrob Chemother. 2010 Mar;65(3):569-75.

Sheshly SH Atkins B, Bejon P, Byren I, Wylie D, Athanasou NA, Berendt AR, McNally MA. The Microbiology of Chronic Osteomyelitis: prevalence of resistance to common empirical anti-microbial regimens. J Infect. 2010 May; 60(5):338-43. Epub 2010 Mar 15.

Moran E, Byren I, Atkins BL. The diagnosis and management of prosthetic joint infections. J Antimicrob Chemother. 2010 Nov;65 Suppl 3:i45-54.

Byren I, Bejon P, Atkins BL, Angus B, Masters S, McLardy-Smith P, Gundle R, Berendt A. One hundred and twelve infected arthroplasties treated with 'DAIR' (debridement, antibiotics and implant retention): antibiotic duration and outcome. J Antimicrob Chemother. 2009 Mar 31.

J Campion; S Masters; I Byren; A Berendt Hip and Knee Reconstruction Team; AJ Price. Mortality Following Salvage Surgery For Infected Primary Joint Replacement. Journal of Bone and Joint Surgery - British Volume, 2009 Vol 91-B, Issue SUPP_III, 421.

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Matthews PC, Berendt AR, McNally MA, Byren I. Diagnosis and management of prosthetic joint infection. BMJ. 2009 May 29;338: b1773.

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