

The British Hip Society European Travelling Fellowship

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During the BHS meeting in Manchester last February I was awarded the European Travelling Fellowship which I undertook in May/June 2012. My proposal was to visit Professor Carsten Perka at the Charité Hospital in Berlin. I had fostered a strong interest in revision hip surgery during my research with Professor Haddad at the old UCH hospital 8 years ago, and through the numerous meetings I have attended Prof Perka had featured in many delivering superb talks on complex revision cases - in particular the use of acetabular cages in addressing severe bone loss.

The Charité is the largest University hospital in Europe with more than 100 clinical departments and 3700 hospital beds, it was initially established in 1710 north of the Berlin city walls, after the partition of Berlin in 1949 the Charité in Mitte remained the main hospital of East Berlin affiliated with the Humboldt University, with West Berlin having two additional teaching hospitals. When after reunification the city of Berlin had to deal with three university hospitals, all were finally merged as sites of the Charité in 2003.

The Centre for Musculo-skeletal surgery is based on the Mitte campus of the Charité under the direction of Professor Perka. He has a talented team at the hospital, and I was privileged to also assist his Chief Consultant, Stephan Tohtz, on numerous occasions.

The unit performs around 1400 joint replacements a year, ranging from primary and revision hip and knee replacements to surgery for FAI. Whilst the majority of trauma is undertaken at a different site, there are still cases that are brought in through the Emergency department. The Charité is a renowned centre of excellence and therefore attracts many tertiary referrals. Follow-up of patients in Germany is limited and it is not unusual to operate on a patient and not see them again. For this reason the failing hip replacement can be referred in at a rather an advanced state.

The standard hip replacement in Berlin is the uncemented Zwei-Muller type stem, of which I saw two main variants being used - the S&N MIA stem and the Aesculap TRJ stem, the commonest acetabular component by far was the Allofit . They have standardised their approach for THR to a supine, muscle sparing antero-lateral approach.

The working day begins at 7am with the Artz ("Residents") ward round followed by the morning meeting at 7:30 in which the trauma admissions are discussed followed by all the elective cases for that day. With the overall management decisions being shouldered by the Professor. Medical students play an integral role in the day to day running of the department much like in the American system, and the first case on the list is prepared and positioned by the medical student and the resident allocated to that list such that knife to skin was never later than 8:30am. The supine approach used relies on the presence of two assistants, something that in our own system would be difficult to achieve what with the working time directive limiting our junior doctors involvement in theatre and our medical students being totally supernumerary.

Despite using a femoral prosthesis that is known for its broad proximal geometry (although the designs employed here were markedly less bulky than the original Zwei-Muller), I was impressed not

only by the excellent exposure of both the acetabulum and femur but also by the lack of gluteal damage inflicted by the muscle sparing approach whilst still maintaining excellent alignment down the femur. After each case the Resident would obtain an "on-table" fluoroscopic image of the THR to confirm the component position and also negate the need for our (often delayed!) post-operative departmental X-Ray.

There were some stark differences notable between the German healthcare system and our own; namely the post-operative rehabilitation. Every patient is kept as an inpatient for a minimum of 7 days post-op, their operative wound having to be completely dry before discharge is even contemplated. Following their hospital discharge they are transferred to a rehabilitation centre, which is staffed by non-operating orthopaedic physicians and physiotherapists. Here they remain for a further three weeks. There were some patients obviously fit for discharge well before this set time point, but the patients *expect* this service and look forward to their period in the rehabilitation centre. I was asked to give a presentation to the unit during my fellowship, and chose to talk about our experience with the Enhanced Recovery Programme (ERP) that is becoming commonplace in our hospitals. Having experienced a very efficient ERP during my fellowship in Bournemouth I felt well placed to eschew its benefits to patients. However, my hosts found it difficult to comprehend why we wanted to discharge our patients so readily and an interesting discussion developed. Essentially if a similar system were to be introduced in Germany it would appear that it would be met with resistance from not only the patients, but also the hospitals as the government only reimburses the hospital the full value of the procedure if the requisite number of days in hospital have elapsed!

The case mix organised for my visit was extensive and I was able to "scrub in" for all of the procedures. This included primary hip replacements of which two were in old DDH patients. In these patients a threaded uncemented acetabular component was implanted. The design of these cups meant that the shallow acetabulae did not present a significant issue to the primary stability of these HA coated components. This was the first time I had seen these cups being implanted - though I did have to mention that I had been present on a number of occasions when they were being removed at revision!

The scope of Prof Perka's revision practice was impressive - ranging from delayed referral primary joint replacement failures with significant bone loss, to the multiply revised patient. These cases were of immense interest to me as one of the aspects I had wanted to observe was Prof Perka's use of cage augmentation in severe osteolysis and bone loss. It is well known that cage reconstructions have a poor long term survivorship, but in some situations it is the only thing left in our armamentarium. Particularly relevant was a single case of a Metal-on-Metal resurfacing in a young patient performed at one of Berlins many other clinics, the prosthesis made by ESKA had their trademark macro textured surface on the acetabulum however upon opening the joint the all too familiar findings (in the UK at least!) of metallosis and massive osteolysis were discovered. In effect this young man had been left with a near total pelvic discontinuity. Following the extensive debridement bone grafting was performed upon which the cage was placed and a cup cemented into place. I was fortunate to part of several cases involving the use of cages and gained valuable tips and tricks into the placement and use of these devices.

Other clinics around Germany whilst commonly utilising an antero-lateral approach use the more conventional "trans-gluteal" approach and Prof Perka has a number of patients with defuncted abductor mechanisms. He is trialling a novel surgical solution to this utilising a Vastus Lateralis flap

that is turned back on itself (maintaining its blood supply) and anchored to the Greater trochanter and Pelvis. Although the number of patients that have undergone this surgery is small (currently approx 10) the results are seemingly encouraging, the patients are told the primary aim is to reduce the pain that is commonly associated with this post-operative complication and so far his results suggest it does so with a 60-70% success rate. Improvement in abductor function is harder to achieve with only around 25% having some notable improvement in abductor strength.

The unit has a strong research output and all of the residents were involved in producing papers for presentation and publication with a number preparing for post-graduate dissertations.

The time spent at the Charité has greatly improved my experience in the operative management of complex revision cases. And I would highly recommend a visit to the Unit to anyone with a specialist interest in complex primary and revision hip arthroplasty. I would like to thank the British Hip Society for giving me the opportunity to undertake the fellowship, and extend my sincerest gratitude to all the staff at the Charité for making my visit a truly fantastic experience, in particular Prof Carsten Perka, Stephan Tohtz, Michael Muller and Bernd Preininger.





(Left to Right): Stephan Tohtz (Chief Consultant), NW, Prof Perka (Orthopaedic Director)



MOM Failure - ESKA implant