

# BRITISH HIP SOCIETY

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## BRITISH HIP SOCIETY

### NEWSLETTER

**June 2011**

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- Presidential Introduction
- BHS Annual Meeting, Torbay March 2011
- British Orthopaedic Research Society Session at BHS
- Presidential guest lecture
- BHS Highlights:
  - Metal on Metal
  - Periprosthetic Fractures
  - Follow-up after THR
- FIPO report

- Future Meetings

## **President's** **Introduction**

### **John Hodgkinson**

I am very pleased and honoured to be taking over as President of the British Hip Society. I joined the Society in 1989 after being nominated by Mike Wroblewski with whom I had worked as a Charnley fellow in 1987. Charnley has been a big influence on all of our careers and although I was never lucky enough to meet him I have now been working at Wrightington for the last 10 years and his legacy is very much ingrained in the fabric of the hospital to this day. However we do live in a world of instant availability of information and so it is very clear that the world of hip surgery is one that is equally as fast moving and that we must keep alert to every new development. New prostheses are being marketed aggressively and promising to improve results. Patients are more and more demanding and they have information on the latest developments available to them at the touch of a button or mouse! The society must never stand in the way of pioneering surgeons but we must never lose sight of the importance of review and guidance. Our Society should nurture a culture of constructive peer review and not blame – as lawyers would seek us to do!

This is perhaps particularly true at the moment when we seem to be entering a period of debate and concern surrounding potential problems in relation to metal on metal joints. Less than 5 years ago this seemed to be the solution to some of the key issues surrounding arthroplasty longevity and wear.



But we must keep it in perspective. We have well respected experts on both sides of the argument all of whom are confident in their position. If we know nothing else and have learnt anything from the Charnley era it is that we must review and record data and build on long term results. The decision 2 years ago that the entry of data on the NJR should be mandatory, is a sign of the Society's willingness to share best practice and acknowledge transparently if any issues are arising in practice nationally.

I hope to see you all in Dublin at the BOA in September 2011 and of course at the BHS annual meeting in Manchester in February 2012.

As President I know I can rely on all your support within the wider Orthopaedic community. There is no doubt that the specialist societies in the BOA have a crucial role to play but we must continue under its umbrella to work for the better delivery of Orthopaedics as a whole service within the NHS.

# ***British Hip Society Annual Meeting 2011***

## ***Immediate Past President: Graham Gie***

The 'English Riviera' hosted the 22<sup>nd</sup> annual BHS meeting from March 2<sup>nd</sup> to 4<sup>th</sup> 2011. Despite the sunny weather and wonderful setting, it was not a time of the year when one would have considered a family visit to this part of England but an excellent venue for this educational meeting with a brisk breeze off the sea discouraging anyone from venturing from the conference centre during meeting hours.

This year there were a number of 'firsts' for the meeting.

The increasing annual attendance at previous meetings, with numbers approaching 300, encouraged the BHS Executive to employ conference organisers to arrange the meeting and discontinue the previous policy of 'in-house' organisation. This decision proved to be a great success with Concept Meetings doing a superb job and running the meeting without a hitch. As always significant secretarial help was received from the BOA secretariat with Claire Wilson being her usual efficient self and kindly attending the

meeting and ensuring there were no last minute hitches.



For the first time we were joined by the Orthopaedic Research Society (BORS) and had a specific session set aside for basic research papers.

In previous years the meeting had been held over 2 days commencing on a Thursday morning and ending on Friday evening. However a fairly large exodus at lunch-time on Friday tended to leave a somewhat depleted audience for the afternoon session. We therefore decided to commence the meeting on Wednesday afternoon and to finish at lunch-time on Friday, having provided the attendees with a substantial morning tea and a late packed lunch on departure. The result: a packed final session.

We were again joined by the Arthroplasty Care Practitioners Association (ACPA) who alternate their annual meetings between, and run their educational sessions parallel with, the Hip and Knee Societies. This formula is proving very successful, allowing for an interchange of ideas between the two societies and allowing the ACPA members to join Hip and Knee Society sessions where there is common interest.

The meeting began on the afternoon of March 2<sup>nd</sup> with Johan Witt's Instructional Course session on 'The Painful Hip in the Young Adult: Conservative Hip Surgery'. Johan's sessions over the past few years have been so successful that they have virtually become a traditional part of the BHS meeting.

Running alongside this session was the combined session with BORS where 12 excellent papers were presented. A

£100 prize, sponsored by the Furlong Foundation for the best paper was presented to Ben Ollivere for his paper on "Variations In Cytokine Tissue Expression May Be Used To Predict Failure In Total Joint Arthroplasty".

This was followed by the now traditional "Emerging Hip Surgeons Forum", ably organised by Jonathan Howell and Steve Blake, for consultants who have been in post for less than 5 years. Interesting surgical cases were shown followed by the usual enthusiastic discussion.

An impressive number of delegates, following a very late night in the pub, succeeded in finding their way to the first session on Thursday morning when the 1<sup>st</sup> Topic in Focus session, "Periprosthetic Fractures of the Hip" was ably organised and chaired by Fares Haddad & Andy Hamer. This was followed by 12 podium presentations on diverse subjects but predominated by papers on venous thromboembolism.

After lunch the Presidential Guest Lecture entitled "Myths and facts of modern thromboprophylaxis following total joint replacement" was given by Dr Alejandro Della Valle from the Hospital for Special Surgery, New York. This really outstanding lecture prompted much controversy and debate and demonstrated that much of what we as orthopaedic surgeons are being encouraged to do, or in some hospitals being coerced to do, with regard to VTE prophylaxis has little evidence to support

that practice and is based on historical risk of DVT in THR. Dr Della Valle has kindly agreed to post his PowerPoint presentation on the BHS website and I would recommend that anyone who did not hear his lecture go on to the site and look at it. Thereafter followed podium presentations on non-arthroplasty hip surgery and the 2<sup>nd</sup> Topic in Focus session "Management & Recommendations for Long-term Follow-up of Hip Replacement", chaired by Gordon Bannister and Lindsay Smith. This subject was very timely particularly in view of increasing financial restraint and the reluctance of GP's to pay for adequate review of patients post-surgery.

At the Annual General meeting that evening, John Timperley was elected unopposed as Vice President of the Society and Richard Field as Webmaster. In contested positions, Fares Haddad was elected Hon. Secretary and Jonathan Howell as Member-at-Large. The Society's Constitution was updated having not been altered for over 10 years. Disappointingly, from the Executive Committee's point of view, the alteration proposing that all members should also be members of the BOA was not accepted by the members. This was unfortunate (author's opinion) as the BHS receives significant support from the BOA and in particular has use of the BOA's offices and receives invaluable secretarial support. Without the BOA, the Society's membership fee would have to be significantly raised. It was agreed that BHS members who are non-members of the BOA would pay a



greater membership fee than BOA members.

Two significant motions were put before the house and passed. Peter Howard proposed the controversial motion that "The BHS supports the use of Aspirin as a pharmacological agent to reduce the risk of thrombosis following total hip replacement". This motion was passed unanimously. John Timperley proposed that "The BHS believes that details of all surgery for femoro-acetabular impingement must be collected prospectively onto a single database linkable with NJR data". Support was almost unanimous. John agreed to head a committee of surgeons with an interest in conservative hip surgery to decide on the dataset.

The meeting was followed by an excellent dinner at the Riviera Conference Centre. The guest speaker was Mr David Gammell from the Help for Heroes (H4H) Foundation who kindly gave up his time for no charge and gave an interesting talk on the work done by H4H and the use to which donations had been put, in particular a state of the art hydrotherapy pool. A large majority of the dinner attendees had kindly agreed to a £5 addition to their dinner costs as a contribution to H4H.

Friday morning's session began with an update on the NJR presented by Keith Tucker, Martyn Porter and Peter Howard, who continue to devote much of their personal time for us to better understand the outcomes of our surgery. Podium presentations on the more traditional THR's then followed, moving

on to the more modern (not necessarily better) implants using metal-on-metal articulation and a short presentation from Peter Foy of Joint Action updating us on the Orthocard.



The final session was the 3<sup>rd</sup> Topic in Focus session and was entitled "MOM with Stemmed Components", chaired by John Skinner and Martyn Porter. Even prior to the meeting, this session created intense interest with both the press and lawyers requesting admission. To allow for unrestricted debate, these requests were refused. A lawyer did manage to gain entry to the conference hall, having been refused registration to the BHS meeting a few weeks earlier, by giving false information and registering on the day for the ACPA sessions. Suspicions were raised when she approached surgeons asking if they would be prepared to act for patients suing for complications as a result of MOM articulations. Your President had the unenviable task of asking her to leave, which she fortunately did after only brief objection. This session was outstanding. The frankness with which the presenters spoke was to be admired. The outcomes presented were frightening with the incidence of ALVAL and component failure of catastrophic proportions. There was a predominance of the ASR XL device which has been withdrawn, but large diameter MOM devices from other manufacturers may be showing similar results. Failure rates range from a 21% revision rate at 4 years (potentially rising to 35% if all currently known painful devices progress to revision) to 49% at 6 years for the ASR XL device. Other

devices have a revision or impending revision rate of 12% to 15% at 5 years.

The meeting concluded at 1435h with Graham Gie thanking his committee for an excellent job done during 2010 during which many controversial issues had been dealt with and handing over the presidency for 2011 / 12 to John Hodgkinson. The McKee prize for the best podium presentation award went to Dylan Jewell and the best poster award to Ajay Malviya.

Following the meeting the BHS Executive felt that the MOM with Stemmed Components issue should be in the public domain and a summary document was released by John Hodgkinson (Incoming BHS President), John Skinner (Chair, MHRA Expert Advisory Group) & Peter Kay (BOA President). This document is presently posted on the BOA and BHS websites.

## **BORS Session:**

### **Richie Gill, Oxford**

The first joint BORS/BHS Research Prize session took place at the Torquay BHS meeting. The session introduced a challenging strict 5 minute presentation format, with a panel of four judges. It was extremely well attended, and the judging was very difficult due to the excellent presentations. The winning talk was presented by Ben Ollivere:

VARIATIONS IN CYTOKINE TISSUE EXPRESSION MAY BE USED TO PREDICT FAILURE IN TOTAL JOINT ARTHROPLASTY B Ollivere, R Evans-Gowing, J Wimhurst, S Donell, I Clark



The two highly commended presentations were:

FORCED AIR WARMING VERSUS CONDUCTIVE FABRIC BLANKETS: A RANDOMIZED TRIAL OF LAMINAR FLOW DISRUPTION M Albrecht, PD McGovern, C Nachtsheim, MR Reed Presented by Paul McGovern

NECK NARROWING OF RESURFACED HIPS IS ASSOCIATED WITH INCREASED WEAR G. Grammatopoulos, A. Callistri, H. Pandit, P. McLardy-Smith, R. Gundle, K. DeSmet, D. W. Murray, H. S. Gill Presented by George Grammatopoulos

The organisers thank the Furlong Research Charitable Foundation for providing the prize.

## **Presidential Guest** **Lecture**

### **“Myths and Facts of Modern Thromboprophylaxis Following Total Joint Replacement”**

**Dr Alejandro Gonzalez Della  
Valle MD, Hospital for Special  
Surgery, New York, USA**

## **Jonathan Howell**

### **Member at Large**

Dr Alejandro Gonzalez Della Valle, associate attending orthopaedic surgeon at the Hospital for Special Surgery (HSS) in New York, gave this year's Presidential Guest Lecture. Dr Della Valle graduated with honours from the University of Buenos Aires and subsequently undertook orthopaedic training in both South and North America. He has been the recipient of grants from the Orthopaedic Research and Education Foundation, the American Hip Society and the Knee Society. He has received several prestigious awards including the Acta Orthopaedica Scandinavia Research Award, the Sir John Charnley Award from the American Hip Society and the Nicholas Andry Award from the

American Academy of Orthopaedic Surgeons (AAOS).

Dr Della Valle has joined colleagues at HSS in the study of venous thromboembolism (VTE) and methods for its prevention, producing a body of work that spans more than three decades and which formed the basis for this year's lecture. In his lecture Dr Della Valle discussed some of the common perceptions around VTE prophylaxis and he examined the justification for the increasing use of powerful chemical thromboprophylaxis for extended periods after routine lower limb joint replacement. The timing of his lecture was pertinent given the publication last year of the NICE report on thromboprophylaxis, which has led to extensive and, in some circumstances, unwelcome changes in prescribing practices across the United Kingdom.

The lecture focused on a multimodal approach to VTE prophylaxis that has been developed at HSS, which includes measures taken prior to, during and after surgery. Pre-operative measures include the stratification of patients, to determine an individual's risk of VTE, the discontinuation of pro-coagulant medication and autologous blood donation. Intra-operatively the HSS team use a combination of hypotensive epidural anaesthesia, intravenous sodium heparin and reduced operating time to mitigate the VTE risk. Post-operatively, pneumatic compression devices are used, patients undergo a rapid rehabilitation programme and the majority of patients receive chemoprophylaxis with aspirin, with warfarin reserved for high-risk patients.



The routine use of powerful anticoagulants, such as low molecular weight heparins (LWMH) and inhibitors of activated factor X and thrombin, is not recommended by the HSS surgeons. In his lecture, Dr Della Valle outlined four main hypotheses that the HSS team believes are used to justify the extended use of such agents following joint replacement. The four hypotheses and the data presented by Dr Della Valle are summarised below:

Hypothesis 1 *Pulmonary embolus (PE) and fatal PE are frequent complications of surgery*

Dr Della Valle presented data from the 1960's through to the 2000's that show that the incidence of PE and fatal PE after joint replacement has reduced dramatically, as surgical and anaesthetic techniques have improved. PE and fatal PE can no longer be considered as frequent complications after lower limb arthroplasty surgery.

Hypothesis 2 *PE and Fatal PE are preventable with the routine use of potent anticoagulants*

Data originating from both the UK and the US was presented, which showed no significant change in the rates of PE over a 10-year period, despite the increasing use of potent anticoagulant therapy during that time.

Hypothesis 3 *All-cause mortality is lower with the routine use of anticoagulants*

Dr Della Valle presented data from a systematic literature review undertaken at HSS, in which 18 publications with a total of 25,000 patients were studied. Statistically significant reductions in all-cause mortality and non-fatal PE rates were achieved using a multi-modal approach to thromboprophylaxis, compared to the use of powerful anticoagulants.

Hypothesis 4 *The proportion of deaths is high and can be lowered with the routine use of anticoagulants*

HSS have undertaken a meta-analysis of data from the last 15 years, presented at the AAOS meeting 2011, which reflects modern surgical and anaesthetic techniques and peri-operative care. Seventy publications were included, covering just over 99,000 patients and seven different thromboprophylaxis regimens were compared for outcome. Rates of mortality from known or suspected PE were no different for patients treated with powerful anticoagulants compared to other treatment groups. Moreover, cardiopulmonary deaths were the leading cause of mortality and this was supported by data presented from the UK and from the Danish arthroplasty registry. The potentially beneficial effects of aspirin in reducing cardiac-related mortality were discussed.

Dr Della Valle has made available to the British Hip Society (BHS) his full presentation, including references for the data that he presented and this can



be downloaded from the Society's website. Society President, Mr Graham Gie (Exeter, UK) thanked Dr Dalle Vale for his stimulating presentation, which challenged many of the concepts currently surrounding the issue of VTE prophylaxis. During the Annual General Meeting of the BHS on 3<sup>rd</sup> March 2011, Mr Peter Howard (Derby, UK) tabled a motion entitled "The British Hip Society supports the use of aspirin as a pharmacological agent to reduce the risk of thrombosis following total hip replacement." After full discussion, the motion was passed unanimously by the membership.

## **Metal on Metal**

John Skinner chaired a Topic in Focus on this subject which is currently a major issue for all Hip Surgeons

### **Introduction**

Over one million Metal on Metal hips have been implanted worldwide, with most in the last 15 years. Almost 400,000 28 mm diameter MOM Metasul hips have been implanted, mainly in Germany and mainland Europe, seemingly with a low incidence of MOM related adverse soft tissue reactions and problems. In the UK from 1996, MOM Hip Resurfacing (HR) was popularised which grew to 10% of all Total Hip Arthroplasties in England and Wales from 2006 – 2009. It also represented 50% of all hip replacements in those under 50 years of age during this time. As problems with HR were reported and to extend the potential advantages of large diameter bearings to those not suitable for HR, large MOM resurfacing

type bearings were used on THR stems as primary Total Hip Arthroplasties. By 2009, in the USA 35% of all Total Hip Arthroplasties were performed with MOM bearings (Bozic et al 2009). This was driven by an enthusiasm to harness larger bearings with lower risk of dislocation (optimised femoral head : neck ratios and greater jump distances) and the laboratory reported low wear rates of these MOM bearings ( less than 1mm<sup>3</sup> of wear debris per annum).

The 2010 Annual Report of the National Joint Register of England and Wales reported a 13% revision rate for large diameter MOM THRs by 5 years. This is higher than for any other bearing or hip implant combination and represents cause for concern. Specific failures have been reported including a 16% failure rate a mean follow up of 1.6 years for the Durom large diameter MOM THR (Zimmer, Warsaw USA). These components were accurately positioned (Cup Inclination  $41.3^{\circ} \pm 5.4^{\circ}$  and Cup Version  $20.2^{\circ} \pm 7^{\circ}$  ) but the failure was attributed to a design feature of the acetabular cup (sharp edges) that damaged the bone at insertion. This was withdrawn, modified and relaunched with more surgeon training.

The ASR Hip Resurfacing and the ASR XL (THR) bearings (Depuy International, Warsaw USA) were both withdrawn by the company due to higher than expected early failure rates. Worldwide, 96249 ASR hips were implanted, (73605 (76.5%) in ASR XL format and 22644(23.5%) in ASR resurfacing form. In the UK, 9960 were implanted, 5568 (53.2%) in ASR XL form and 4659 (46.8%) as ASR

resurfacings. Even reanalysing the NJR data without ASR XL devices there still seemed to be a higher failure rate for large diameter MOM THR of all types.

For this session at the 2011 British Hip Society Meeting, these were defined as monoblock acetabular cups of the resurfacing type articulating against a matching head on a stem (THR). They all had a femoral head diameter greater than 36mm. For these components to fail, metal debris could be generated from the bearing surface, the taper where the femoral head fixes to the femoral stem or from the stem itself. There is increasing evidence from several centres that there is a significant problem with this type of implant and that there may be problems at the taper junction, whether by wear or corrosion. Langton and Nargol presented the results of 87 ASR XLs performed by 3 surgeons using either Corail or SRom stems. They also have a series of 417 ASR Hip Resurfacings (HR) performed by the same surgeons.

They reported a 50% failure rate at 75 months for the ASR XL group. This compared to their ASR series where the failure rate was 26% at 75 months (10% in the larger diameter group and 30% in the smaller diameter group). This suggested that larger diameter bearings were protective against failure in HR but that this was not seen in the ASR XL group. Also they felt that optimum component position was not protective, with 40% of failures having cup inclination angles of 35° – 55° and anteversion of 5° – 25°. They also reported less surface wear on ASRXLs than in ASR resurfacings. Added to this they reported higher Cobalt ion levels

with the ASR XL than the ASR, which has also been reported with Durom (Zimmer) by Garbuz, Conserve Plus (Cremascoli) by Beaulé and BHR (Smith and Nephew) by Holland. This along with data on damage to the trunnion led them to believe that these large bearings generate high frictional torque and damage to the trunnion either by wear or corrosion that generates a wear product that is possibly more bioactive than that produced from the bearing surface by wear.



Beverland from Musgrove Park Hospital, Belfast presented results on 121 ASR XL THRs with 120 on Corail stems and 1 on a C Stem. These were in 70 males and 51 females with a mean age of 54.2 years. All components were implanted between November 05 and May 07. Beverland stopped implanting these devices because his outcome assessors (trained specialist nurses who prospectively follow up patients and collect outcome data in this unit that regularly performs 1000 joint replacements each year) stated that patients with ASR XL THRs were in more pain (Table 1) at one year than similar patients with non MOM bearings

	Controls	ASR XL
No Pain	62.4	42.7
Very Mild	20.5	25.6
Mild	8.5	13.7
Moderate	6.8	14.5
Severe	1.7	3.4

**Table 1 showing percentage of patients with each pain level 1 yr post THR in Belfast**

Having stopped implanting the ASR XL device, Beverland saw his first pseudotumour case in January 2008 and then a further 3 patients requiring revision surgery in early 2009. The component positions were analysed. The mean cup inclination angle was 47.9° (sd 5.8° and range 31 - 65°). 76% were 45° or more and 35% were 50° or more.

Radiographic changes were present in 76% and these were progressive radiolucent lines in the proximal Gruen zones 1 and 7, leading in some to osteolysis. Out of the 121 patients with ASR XL THRs, 19 have been revised and a further 7 booked for revision. On top of this there are a further 16 cases with significant symptoms or radiological signs that are closely reviewed and seemed likely to require revision in the future, according to the Author. Therefore the revision rate is 26/121, 21.5% at 3.75 – 5.25 years post implantation, but potentially rising to 26 + 16/ 121 34.7%.

In the 19 cases already revised, 63% had loose acetabular components, 68% had loose femoral components, 21% had pseudotumours / adverse soft tissue reactions to metal debris and 11% had pelvic discontinuity. The mean time to revision was 38.2 months.

The Authors postulated that these large diameter bearings were failing to achieve good lubrication and therefore generating high frictional torques that led to component loosening. While some of the adverse metal reactions were likely to be generated as a product of wear at the bearing surface, they felt that there was also a problem at the

trunnion /femoral head junction either by wear or corrosion. The Authors felt that femoral heads above 36 mm should be avoided and that the role of MOM articulations should be reserved for Hip resurfacing in a very small number of male patients.

Latham presented the Southampton series. They had been early adopters of Hip Resurfacing technology, but had not been happy with the results in female patients. They had been attracted to the concept large diameter MOM total hip replacements on stems with good track records for durability, as a way of improving wear resistance, reducing dislocation rates and avoiding one of the problems in females of osteopaenia in the femoral neck, leading to a risk of loosening or fracture with hip resurfacing.

They reported series with the MS30 stem and MMT head, CPT stem and MMT head, CPT and Adept head and the Adept uncemented stem and Adept head. With these devices, they noted an increased failure rate with trochanteric pain, noise from the bearing and crepitus. They stopped implanting these devices in January 2008.

Their findings included pitting of the stem surface, particularly the distal part of the stem in the cemented stems. Using Redlux to measure wear, they found low wear rates on the articulating surfaces (max linear wear 6.9micrometre on the head and not measurable on the cup). There was increased out of roundness at the taper trunnion of 35 micrometre +/- 13.3.



In the cemented hybrid groups, The CPT / BHR group had 7 failures out of 75 in females (9%) and 5 failed out of 58 in males (9%). In the CPT / Adept group, there were 9 failed out of 55 (16%) in females and 3 out of 43 in males (7%).

In the uncemented hybrids, there were 3 failures out of 17 in females (16%) and 1 failure out of 69 in males (1.4%). They reported one further male patient with pain and elevated Co / Cr levels who was likely to need revision imminently.

In their cemented series of 199 hips performed between 2003 -2007, there were 17 revisions and 88% (15/17) were for Adverse Reactions to metallic Debris (ARMD) in females. The average time to revision was 45 months. The actual 5 year survival rate was 88% in females and 98.6% in males. They reported a further 12 cases awaiting revision surgery giving a revision rate of 15% within 6 years.

The average age of patients was 60 years with follow up of 63 months (range 32 – 83 months). Unlike in resurfacing arthroplasty, head size seemed to play no role in predicting failure. Component orientation also seemed to be good ( average abduction angle 40° / anteversion angle 12° as measured by EBRA). Higher Cobalt and Chromium ion levels were seen in the revision group. The authors felt that the best predictors of failure were new and worsening symptoms and changes on plain radiographs that are progressive.

They postulated that failure was not device specific, they felt that the femoral heads were too big for the trunnion, that there was excessive wear / corrosion at

the trunnion and that the cement / implant interface in cemented stems provide a 'space' in which Galvannic corrosion may occur with these devices. They also felt that the host reaction to metal debris was more marked in females.



Jones presented the results from Cardiff which is a high volume hip unit for primary THR and a tertiary Centre in South Wales for complex revision problems. He reported failures for Adverse Reactions to Metal Debris with all Large diameter MOM THRs that had been used in the hospital including Corail ASR, Anthology BHR, Profemur Conserve Plus, SL Plus Cormet 2000 and CPT / ZMR Durom.

The personal experience of 24 revisions in 159 ASR XL hips was presented (15% early revision rate). In 33% constrained acetabular liners were required because of soft tissue damage to the soft tissues and muscles of the proximal femur. In several, the stem was retained but using the Bioball system of taper sleeves and ceramic femoral heads. This was due to macroscopic taper changes / damage.

In the series of bilateral ASR XLs 44 hips in 22 patients, 7 were revised giving a 32% revision rate. All had Co and / or Cr levels of greater than 10ppb. Interestingly all failures were on the second performed side, with none having been performed simultaneously. This led the authors to postulate that there may be a 'Second Hit' phenomenon as sometimes seen as biological systems reach saturation.

In the revisions for ARMD, 84% occurred in seemingly well positioned implants. In 64% there were adverse radiological signs of problems seen on plain radiographs. These included progressive acetabular osteolysis, calcar remodelling and progressive proximal femoral osteolysis. A small erosion seen in the calcar in Gruen zone 1 was observed with all MOM articulation types (different manufacturers) on stemmed femoral components and was thought to be characteristic of debris related problems.

Jones also reported that the last 6 dislocations seen in their department were due to ARMD and debris disease. All of these cases were revised to constrained acetabular components due to soft tissue necrosis and muscle damage.

Once again, the authors noted that the bearing surface showed little or no wear or edge loading, all showed macroscopic damage to the trunnion which was thought to be wear or corrosion.

In cases referred in to their unit, they felt that 11 out of 19 (57%) were malpositioned. They felt that excessive femoral stem anteversion was a particular issue and frequently seen with ARMD cases in this referral group. The patients presented with pain, swelling, fractures and nerve palsies.

In the LDMOM THR's on cemented stems, there was a recurrent pattern of trochanteric fracture seen. This was often seen when these bearings fail on top of cemented stems and was associated with degradation and

damage to the cement mantle. This was so extensive that it was rarely possible to retain the mantle and perform cement in cement revisions.



Finally the authors reported the same ARMD failure pattern in 5 out of 275 (2%) Corail Pinnacle 36mm MOM bearing THRs and in 10 out of 84 (12%) R3 Birmingham MOM THRs.

In conclusion, Jones felt that ARMD was a failure mechanism that was seen in all stemmed MOM THR bearings and no device was thought to be immune. He felt that the Trunnion was often the failure point and that lessons learned from MOM Hip resurfacing did

not explain all the failures in LD MOM THRs. In patient follow-up, he felt that clinical assessment was vital and that pain and limp were significant symptoms. Radiological assessment was essential and much more likely to show problems than plain radiographs in hip resurfacing cases. Finally metal ion analysis was useful.

Metal ion level	Cobalt		Chromium	
	Revised %	Not Revised %	Revised %	Not Revised %
< 3ppb	9	31	13	15
3-7ppb	23	25	23	40
>7ppb	66	42	61	42

**Table showing metal ion levels correlated with revision status in the**

## **Cardiff Series of Large Diameter MOM THR**

In summary there clearly seems to be a problem with higher than expected early revision rates for all the device combinations mentioned in the above talks. There is therefore a concern regarding large diameter MOM total hip replacements as a group. The audience and panel felt quite strongly that these devices should not be implanted until more is known and understood about their unacceptably high rates of early failure.

## **Periprosthetic Fractures**

This symposium was chaired by Fares Haddad and Andrew Hamer. Summary slides will be uploaded onto the BHS website member's area

### **Fares Haddad, UCL, London**

Peri-prosthetic fractures represent a complex epidemic that continues to challenge orthopaedic surgeons all over the world. The symposium addressed both fractures on the femoral and on the acetabular side. These fractures are increasing in frequency due to patient longevity, increase in the number of revision operations, in the use of cementless implants, the increase in waiting lists and difficulties with arranging appropriate follow up and with the diagnosis of silent osteolysis. These are often elderly patients with multiple comorbidities that can render management difficult.

The management of peri-prosthetic fractures is facilitated by a structured algorithm. Key messages include the fact that these are expensive cases that

should be managed in expert centres. The management should be based around a structured strategy. We use the Vancouver classification system which divides the fractures according to their location, according to the fixation of the stem and according to the available bone stock. The key distinction is between the type B1 fractures where the stem is well fixed and hence internal fixation should be considered, and the type B2 or B3 fractures where the stem is loose and revision surgery is mandated. Many previously published series of high failure rates related to the inappropriate use of a fixation devices. There are now many fixation options including modern third generation cables and locking plates. The use of biological techniques including cortical strut grafts has been well described. Revision surgery is necessary for the 80% or so of cases where there is stem loosening.



### **T.N.Board; Centre for Hip surgery, Wrightington Hospital.**

#### Introduction

We set out to try to improve our service provision for this patient group.

#### Acceleration of transfer process.

An audit of urgent transfers with periprosthetic fracture showed significant delays in all measures. Redesign of the service was undertaken, utilizing transfer packs containing information for anaesthetic decision making, directed investigations at the referring hospital and a mechanism for identification of available list space. Re-audit after introduction showed significant improvements in quality of care in all areas.

#### Cell-salvage

Blood loss is significant in this patient group and we analysed the transfusion requirement of patient with periprosthetic fracture with and without the use of intraoperative cell salvage. Audit of these cases showed a significant reduction in blood transfusion of 1.33 units per case.

#### Conclusion

Simple improvement in process can lead to significant improvements in quality of care

#### **Andrew Manktelow – Nottingham. Femoral revision for Vancouver B2/B3 peri-prosthetic fractures**

Of over 200 peri-prosthetic fractures treated at QMC, 51% were Vancouver B2/B3. 90% required revision surgery. Principles involve treating fracture and loose prosthesis simultaneously, with revision. Concerns include: associated co-morbidity, poor bone quality, multiple previous operations and complexity of reconstruction.

Majority managed with Modular uncemented revision. Modularity allows neck version, leg length stability and offset to be restored independently, once distal fixation and bypass has been achieved. The technique is versatile and reliable.

Alternatives include non-modular stems, distally locked stems, proximal femoral replacement and cemented reconstruction.

Careful clinical assessment is required. Revision surgery should be considered, even in the presence of a well-fixed

stem, with short oblique or transverse fractures or when the fracture pattern is unfavourable. Implant removal can be difficult. The surgeon should be familiar with all the reconstructive options.

These complex and increasingly common injuries should be treated in appropriate centres where the required surgical experience is readily available.

#### **Stephen A Jones, Cardiff. Acetabular Periprosthetic Fractures**

Acetabular Periprosthetic fractures are a rare but menacing complication following Total Hip Arthroplasty. Cemented acetabular components have a significantly lower incidence compared with cementless shells. It is important to appreciate risk factors when present and therefore potentially avoid.

Considered broadly as either intra-operative or post-operative events understanding exact injury pattern is vital. The principals of management depend upon both fracture morphology and acetabular component stability.

For intra-operative fractures where implant is stable and the acetabular fracture undisplaced multiple bicortical dome screws are sufficient. Posterior plating via extended approach may be required for displaced fractures or a significant column injury. However if the acetabular component is unstable or if the surgeon is unable to understand the fracture configuration then bailout, investigate and enlist appropriate help.

Late fractures associated with osteolysis are the most challenging and with this group in particular the modern armamentarium has helped improve the

marriage between fixation and reconstruction.

## **Follow up after Hip Replacement**

### **Gordon Bannister**

#### *Background:*

Some 85% of patients of 65 years or over are out survived by their primary hip replacement (THR). Follow up after THR may be undertaken to assess and treat causes of postoperative dissatisfaction, maintain contact with patients whose arthroplasties are likely to fail or anticipate loss of bone stock before the defect becomes irrecoverable before periprosthetic fracture. Mortality after periprosthetic fracture is 11% and function results are poor

#### *Strategies of Follow up:*

The early Charnley THRs performed at Wrightington were followed annually. The operation was novel, most patients above the age of 60 years at the time of surgery and as the longevity of the implant became apparent they were reviewed less frequently. After 20 years, just fewer than 5% were still alive indicating that the burden of follow up after THR is finite and declines with time as patients succumb from unrelated causes. Attitudes to revision amongst surgeons and general practitioners have crystallised over the last 15 years. Whereas some 25% of Orthopaedic surgeons around Leeds favoured long

term follow up in 1998, this had increased to 97% in 2005 in the North West of England. In 2007 in an extensive postal survey, 2% of general practitioners favoured undertaking their own follow up but this met approval from no Orthopaedic Surgeons or patients who felt more comfortable with continuity of care within the team that had performed the original THR.



NHS managers favour new patient consultations over follow up and there is a population of patients in South East Wales with hybrid metal on metal hip replacements using the withdrawn ASR cup in whom revision rates are 15% at 3 years who are being denied follow by the local health care commissioners.

#### *The Rationale for Follow up*

The median time to revision in the Swedish Arthroplasty Registry is 11.9 years in a predominantly cemented practice. The combined data from the National Joint and Scandinavian Hip Registers indicates that the main cause of revision remains aseptic loosening or endosteal lysis but that this is clinically silent in between 33 and 47% of cases. This suggests that patients should be followed in the preceding years. A review of the revision THRs undertaken between from 2009 to 2011 in my own unit, indicated that 38% of revisions were performed for lysis around cementless polyethylene lined cups of which some 60% were asymptomatic and identified radiographically at routine follow up. Other causes of revision included loose cemented cups, failed resurfacings, infection, recurrent

instability and cemented stems. All of these were symptomatic to some extent but many insufficiently to generate hospital referral.

The rationale for follow up should be to identify patients and prostheses at risk of failure and ensure that they are reviewed early enough to avoid extensive silent bone loss.

### *Patients and Prostheses at Risk*

#### *Patients*

In the 2010 National Joint Registry, 82% of THRs were performed on patients of 65 years or older and 44% in those over 74. The 10 year life expectancy in patients who had undergone primary THR in Bristol is 90% in those under 65 years at the time of surgery, 71%, between 65 and 74 years, 47% from 75 to 84 years and negligible over 85 years. The 10 year survival of THR with revision as the outcome is 96% in patients of 75 years or older at primary THR and 85% in those under 50. In older patient survivorship declines in a linear fashion but, in the young, deteriorates exponentially after 7 years. 82% of revision THR undertaken in my own unit was undertaken in patients who were under 65 years when the primary procedure was undertaken.

As revision increases with longevity and patient activity, those at greatest risk are those under 65 at primary THR and it is this population that is most in need of follow up.

#### *Prostheses*

The survivorship of uncemented prostheses is inferior to cemented at all age ranges but this is explained almost entirely by the acetabular component which, in patients under 50 years, have a 72% survivorship at 10 years.

### *Combined Effects of Patients and Prostheses*

As uncemented prostheses have been disproportionately implanted into younger population, the combination of life expectancy, increased activity and prostheses that fail earlier conspires to place patients under 55 years at primary THR at a seven fold greater risk of revision.

### *The Effectiveness of Follow up*

A review of routine follow ups in my own unit, 3% were listed for revision, 25% underwent intervention for conditions related to THR such as trochanteric bursitis and in 1% opportunities to intervene were missed. There were clinical symptoms in 20% between the first tenth year and 63% thereafter. There was little radiographic evidence of wear in the first postoperative year, 10% between 1 and 10 years and 57% after 10 years.

Follow up currently takes place disproportionate in the early years after THR when the identification of wear and impending failure occurs predominantly after 10 years.

### *Effective Follow up (Table)*

Although early follow up identifies few cases requiring revision, it keeps contact with patient and allows treatment of symptoms after THR. This is most

effectively done by Arthroplasty practitioners who can screen by telephone saving patients a trip to hospital and target radiographs to those who are symptomatic. They can be alerted to the population at risk which is young patients with uncemented polyethylene lined cups and metal on metal joint replacements.

The British and Australian Orthopaedic Associations both recommend one follow up in the first 1 – 2 years after primary THR and thereafter for life. The British suggest 5 yearly review and Australians 2 yearly after 10 years. As revision increases exponentially after 7 years in the young population at risk, it would seem sensible to review clinically and radiographically at that point. Patients of 75 years or more with well tried cemented implants and no evidence of radiographic failure could be discharged at this point as the risk of silent bone loss is negligible but close surveillance is required in young patients with uncemented polyethylene lined cups and metal on metal joint replacements.

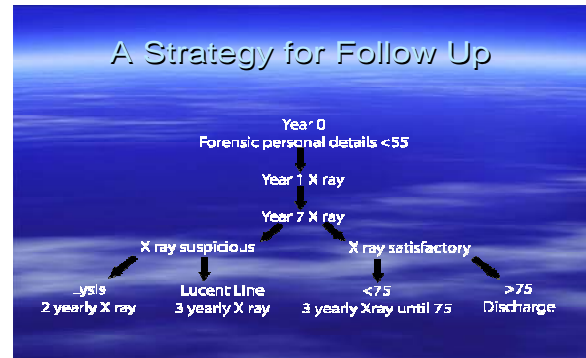
*Resource Implications*

The resource implications of the follow up strategy recommended would be less than current practice in my own and other units but would be better targeted and more effective in identifying impending failure the THR. The mean number of follow up appointments would be 4 per primary THR performed. Most of these need not impinge on routine outpatient clinics as assessment could be carried out by Arthroplasty Practitioners and radiographs reviewed

by Consultants on the now ubiquitous PACS viewers



Table



**FIPO UPDATE**

**Fares Haddad, UCL,  
London**

**BUPA AND NEW CONSULTANTS' CHARGES**

Although not strictly relevant to hip surgery, the BUPA preauthorisation proforma for knee arthroscopy has caused great concerns. You will have communications about this from Peter Kay and Mike Kimmons at the BOA. The BOA, BASK and FIPO continue to work together to resist what may be a dangerous precedent that threatens clinical autonomy and the doctor patient relationship.

**HMRC HOSPITAL CONSULTANTS' MILEAGE CLAIMS**

The recent case of Mr Paul Mellor and HMRC (TC00906) gave rise to a tribunal ruling that logically his home was his base because this is where he kept his records. He is a self-employed electrician working from home, and this

judgement may be helpful to doctors who have their office at home regarding mileage claims. It does not affect those with offices or consulting rooms in other locations, such as those in private hospitals. Accountants for individual consultants involved in motor expense investigations should quote this case. However there may be an HMRC appeal to a higher court against that judgement.

### **BUPA AND NEW CONSULTANTS' CHARGES**

An email has been sent out by BUPA to all newly recognised consultants, regarding invoices rendered outside their recognition agreement with BUPA. This is the first formal notice that if charges fall outside the agreed limits, or if a shortfall is charged, recognition will be withdrawn. FIPO continues to stress that the patient's primary relationship is with the treating consultant, but this is broken when the clinician has entered into a contractual obligation with an insurer.

### **OUTPATIENT AND FOLLOW UP CHARGES**

There has been considerable concern about BUPA's decision that a procedure fee and a separate follow up consultation fee will not be paid if the procedures are undertaken at the same time, or on the same day. The Assistant Medical Director at BUPA has said that their computer systems have been set to recognise what they now say is "double billing", to disallow one payment.

There was general agreement on the FIPO board that when a patient attends an appointment for a planned procedure only a procedure fee should be charged.

However, there are clinical scenarios which do not fit within the insurer's understanding. A senior ENT surgeon gave the example that a cancer patient with fresh symptoms returning for follow up and for whom correct clinical management requires an immediate nasoendoscopy, might then need support counselling and explanation, if it was indeed confirmed that there was recurrent disease. Both the consultation and the procedure are necessary and would inevitably be time consuming.

In other specialities it has been common up to now to administer a therapeutic injection at the time of follow up consultation, according to need. It has furthermore been suggested by the insurer that a shortfall cannot be charged to the patient if they only pay for either the procedure or the follow up. There are cases where surgeons have been asked to pay back what were considered to be unjustified fees, in the insurer's viewpoint. The legality of this is questionable.

It is recognised that those who have signed up to a BUPA Consultant Partnership agreement are bound by their contract, but many who are affected are unhappy about the legality of what is seen as a unilateral reduction in cover for patients. One speciality association has considered recommending that all its members in the Consultant Partnership may wish to withdraw so as to free them to charge patients appropriately but in a reasonable fashion and after due notice.



A clinician said that when he had rung BUPA for clarification, the clerk had said “why don’t you just bring the patient back tomorrow”. Surely this is not good or cost effective for the patient who may be part of a company scheme or self employed. Further, what about the patients seen urgently (e.g. with acute appendicitis) who needed surgery that day?

FIPO and other groups are discussing this matter with BUPA.

### **PRIVATE HEALTH CARE: FIPO & HCSA’S RESPONSE TO OFFICE OF FAIR TRADING INVESTIGATION**

FIPO has been the main instigator of the professional complaints leading to the current OFT Market Study. The extent of the OFT study is now being defined and submissions have recently been sent to the OFT from all sides of the private healthcare market. Other FIPO membership groups have been eloquent and forceful in writing to the OFT including the Association of Anaesthetists who worked with FIPO to help set up the market study and since the OFT announcement submissions have been sent from the Hospital Consultants and Specialists Association, the Independent Doctors’ Federation and ENT-UK. Other professional groups have also responded to the current request by the OFT to define the extent of the market study.

The main concerns voiced by FIPO have been:

#### **RESTRICTION OF PATIENT ACCESS**

1. Insurers’ restricted networks
2. preferred providers
3. restricted policies (eg, the 6 week rule)
4. access denied to capped or delisted consultants

5. allocation of clinician by insurance company on non clinical basis

#### **POLICY EXCLUSIONS (WHICH MAY NOT BE EXPLICIT)**

1. lack of transparency
2. unilateral changes to policy contracts
3. intentional or unintentional misrepresentation
4. definitions e.g. “acute”, “chronic”
5. disallowed “top up” payments by subscribers



#### **EXCLUSIONS OF NON-NETWORK PROVIDERS**

1. inclusion in a network on the basis of price restriction
2. interference in clinical protocols
3. restriction of outpatient cover and benefits
4. limits on physiotherapy etc
5. exclusion of chronic conditions
6. exclusion of new and expensive treatments: eg. cancer drugs

#### **RESTRICTIONS ON CLINICAL PRACTICE**

1. the reality of “quality” v price
2. inappropriate professional “standard setting” by insurer
3. inappropriate “recognition” of “specialised centres”
4. the most experienced and expert clinicians are often excluded from provision through capping or delisting
5. coding problems: cost v clinical accuracy, incorrect codes used against clinicians

The Hospital Consultants and Specialists Association is a member of FIPO. In his letter to the HCSA members, Dr Umesh Udeshi, President

of the HCSA, (HCSA News 58 February 2011) wrote that “the HCSA supports the OFT in its investigation of whether the market is working well for private healthcare patients, and in particular the OFT’s valid concerns about:

- The existence of any restrictions on the ability of consultants and other medical professionals to practice and
- How consumers access and assess information and how they exercise choice of provision

He noted that those difficulties had arisen through:

1. restricted “preferred provider networks”
2. restrictions on clinicians’ practice
3. policy exclusions without patient awareness

He concluded *“from a clinician’s, and most importantly a patient’s prospective, there are significant concerns about the health insurers and the way that their actions restrict clinical practice, and most importantly, compromised patients’ access to information, the ability to exercise informed choice, and to have access to the best clinical care”*.

FIPO will continue to work with all its membership groups to ensure that the professional views are fully represented and will provide updates as and when the precise modus operandi of the OFT Market Study is announced.

## **Future Meetings**



The combined BOA / IOA meeting will run in **Dublin on 13-16<sup>th</sup> September 2011**.

The British Hips Society will be strongly represented at the joint BOA, IOA meeting in Dublin. Our main sessions will run on Wednesday but there are free paper sessions and a National Joint Registry session as well as on the Thursday. The programme follows at the end of this newsletter.

The instruction course session will be:

- **Impaction grafting for the acetabulum.**

There will be a keynote lecture by Graham Gie

- **‘Hip Replacement Progress at what cost?’**

The Presidential guest lecture will be given by

- John Callaghan

The Robert Jones lecture by

- Martyn Porter

The Walter Mercer Lecture by

- Colin Howie.

The BHS Annual Meeting and AGM 2012 will be

- February 29<sup>th</sup> to March 2<sup>nd</sup> 2012  
(in Manchester at the Piccadilly  
Ramada Hotel : further details  
about registration will be  
released on line in September )

The deadline for abstract submissions  
will be Nov 15<sup>th</sup> 2011