BRITISH HIP SOCIETY

BHS SURGICAL STANDARD

Peri-operative care for Complex and Revision Hip Arthroplasty

Background & Inclusion

A well-defined pathway should be in place for the management of complex arthroplasty patients from surgical planning to discharge. This includes pre-assessment to determine suitability and optimisation for surgery, surgical and anaesthetic planning coordinated through a multi-disciplinary team (MDT) meeting, provision of adequate theatre and post-operative care resources and appropriate follow up including physiotherapy services. This guideline should be used in conjunction with the BHS standards for revision surgery and the BOAST standards for 'Providing a Continuous Safe Elective Orthopaedic Environment'[1]. These guidelines should be considered for all revision hip surgery including further surgery around hip hemiarthroplasties, and complex primaries e.g. for metastases, previous infection, and significant anatomical deformity.

Pre-operative anaesthetic assessment & surgical planning

1. A defined anaesthetic pre-assessment pathway is mandatory for planned cases. This should involve physiological optimisation and occur at the earliest possible stage once a decision to operate has been made. This will allow adequate time for treatment to prevent unnecessary delays later in the pathway.
2. Areas for optimisation include BMI, nutritional markers (albumin, vitamin D) and blood glucose, in conjunction with primary care, dietary/nutritional specialists
3. There should be defined pathways for managing low haemoglobin (including IV iron therapy where available)
4. In high-risk cases:
    a. MDT discussions between consultant anaesthetists, surgeons and the patient may be required to determine suitability for surgery. MDT discussions may require input from Infectious Diseases and Microbiology specialists and plastic or vascular surgeons.
    b. This may also include discussion of issues such as resuscitation status/ preference.
    c. Risk assessment tools e.g. SORT or NSQUIP should be considered in order to give risk of mortality as part of shared decision making.
    d. A named consultant anaesthetist for the theatre list with knowledge of the case prior to the day of surgery is desirable.
5. An adequate written plan should be in place for cessation or replacement of usual anti-coagulant therapy during peri-operative phase, including a post-operative prophylaxis plan.
6. Attempts should be made to exclude infection as per BHS Surgical Standards for Periprosthetic Joint Infection.
7. Where patients have had past infections unrelated to planned hip arthroplasty (e.g. MRSA, past UTI etc), every effort should be made to identify this pre-operatively and ensure an adequate IPC plan is in place (if required) to prevent unnecessary delays on the day of surgery.
8. Appropriate radiographic imaging, ensuring AP & lateral radiographs. CT where there are 3-dimensional defects or abnormal anatomy. Spino-pelvic views may be useful in recurrent dislocation cases

Consent

9. All revision cases should have a two-stage consent process with a separate 'sign-off' consent clinic face to face appointment near to the time of surgery. This allows final discussion of risks, a final check that all planning actions have been completed and a final examination. The consent process should be supported by written or online information.

Equipment Planning

10. It should be routine practice to discuss all complex arthroplasty cases in a surgical planning meeting or MDT prior to surgery to ensure adequate plans are in place for kit, including back up resources. Kit requests should be made in advance of the day of surgery to theatres, and can be facilitated by a dedicated email address.

Intra-operative & Theatre Considerations

11. Arthroplasty cases following non-clean surgery in the same theatre (eg afternoon arthroplasty session following other surgery) should be avoided where possible due to the potential for cross contamination.
12. Anaesthetist changes during complex arthroplasty lists should be avoided where possible, to reduce disruption, inefficiency & safety issues.
13. Cell salvage is recommended for all revision cases, where it is viable to do so. There should be planned and adequate provision for blood products, if a blood bank not on site.
14. Complex revision cases require support from consultant anaesthetic colleagues with appropriate experience.
15. Complex revision cases require support from appropriately experienced theatre staff, with formal arrangements in place for regular staff training and education.
16. The equipment list should be checked against the MDT plan at theatre briefing prior to start of list.
17. Kit support staff should be allowed in theatre where possible to support staff and ensure complex kit is used appropriately and safely.
18. Protocols should be in place for intra-operative complications, such as vascular injury requiring specialist vascular input, where specific resources or expertise is not available on site.

Ward care & Enhanced care requirements

19. Ward cover could be from medical or allied professional teams. However, they must be part of the regular orthopaedic team regardless of postoperative location of patients.
20. In the event of clinical concern, escalation pathways to nominated orthopaedic clinicians should be in place.

[1] https://www.boa.ac.uk/resources/boast-providing-a-continuous-safe-elective-orthopaedic-environment-final-pdf.html

21. There should be daily senior (SpR or above) orthopaedic ward round review.
22. There should be nursing expertise and competences specific to complex surgery in place, including adequate escalation protocols.
23. If patients are cared for in a 'cold elective' site, criteria must be in place for post-operative transfer for medical complications.
24. Access to appropriate critical care facilities (in line with other BHS surgical standards). Requirement for critical care facilities should not compromise surgical waiting time. Adequate regional provision of this support should be in place.
25. Patients should be considered preoperatively for enhanced care/ critical care requirements.
26. Ward facilities should be in line with the 'Providing a Continuous Safe Elective Orthopaedic Environment' BHS surgical standard.
27. Elective ward-based staff should not routinely move between 'clean joint' wards and other wards (including other T&O wards) within a shift.
28. There must be 7-day provision of physiotherapy services with a pre-operative physiotherapy assessment being the optimal arrangement.
29. There should be no infected patients within the general elective ward environment. Post-operative 1st stage and single stage procedures carried out for infection may be deemed clean but should be considered for isolation in side rooms.