A day in the life of an orthopaedic house officer

Introduction

Orthopaedics is a busy specialty with a high inpatient turnover and heavy outpatient workload. The orthopaedic team relies on its foundation doctors to manage ward patients effectively as well as dealing with on-call commitments. As a taster of what to expect, or as helpful tips for a current job, the following is a guide to a day in the life of an orthopaedic house officer.

07.45–08.00 Trauma meeting

This meeting presents the cases seen on call in the last 24 hours. The on-call team are present as well as other orthopaedic consultants, registrars, senior house officers, foundation doctors and senior nursing staff.

Cases are presented by the on-call team, for each case the X-rays are reviewed and further management is discussed. Juniors are encouraged to get involved, as trauma meetings are an excellent opportunity to present patients as part of mini-clinical evaluation exercises or case-based discussions. *Figure 1* gives a guide to presenting cases and X-rays.

08.00–09.00 Ward round

The trauma meeting is followed by the ward round. For the on-call team, this will be the post-take ward round, incorporating both new and old patients; other teams will review current patients and make decisions about further management. Most patients will be postoperative, requiring daily reviews. Remember these patients may have other medical issues that need to be managed. Ahmed et al (2009) gives more advice on conducting ward rounds. Some helpful hints for orthopaedic ward rounds are given in *Figure 2*.

After the ward round, the foundation doctors should divide themselves between theatre, ward work and clinic attendance. Use your initiative to plan the day, for example, if it has been a lengthy ward round use the morning for ward work and aim to attend theatre or clinic in the afternoon. This ensures a well-rounded experience of the specialty and maximizes learning. Talk to seniors early on in the placement about making this possible.

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09.00–13.30 Theatre or clinic

Orthopaedics is a specialty with ample theatre time, try and coordinate with other juniors to cover the ward so each

Figure 1. Presenting orthopaedic cases.

State the patient's name, age, gender

Type of injury (e.g. left fractured neck of femur)

How the injury was sustained (e.g. mechanical fall, road traffic accident)

Relevant past medical history, including any medications that are contraindications to surgery (e.g. warfarin)

Social history – mobility before injury, including the use of mobility aids (e.g. mobilizes with a Zimmer frame)

Relevant blood results (e.g. haemoglobin, renal function, clotting)

Discuss the X-ray – type of film (antero-posterior or lateral), joint involved, left or right, fracture of which bones, type of fracture (open, closed, transverse, oblique, comminuted, intra- or extra-articular, intra- or extra-capsular)

Figure 2. Hints for orthopaedic ward rounds.

Keep an up-to-date patient list, with the patients' name, date of birth, hospital number, location, diagnosis, progress, jobs and recent bloods

On the post-take ward round foundation doctors should equip themselves with the essentials (mainly consent forms, X-ray forms and a marking pen)

For any postoperative orthopaedic patients:

1. Review the surgical wound, comment on whether it is healing well, oozing, bleeding or if blisters are present (can be caused by dressings)
2. Check the neurovascular status of the limb involved (e.g. palpable pulses, capillary refill time, sensation and movement)
3. Check the observation charts for any indication of sepsis or blood loss (e.g. falls in blood pressure, tachycardia, pyrexia, falling oxygen saturations and increased respiratory rate)
4. Postoperative complications to be aware of are pyrexia (day 1–2 mostly as a result of pulmonary atelectasis or blood transfusion reactions; day 4 mostly as a result of chest, wound or urinary sepsis), tachycardia, hypotension, pain, oliguria, chest pain or shortness of breath
5. Examine the chest and abdomen of immobile postoperative patients as they are prone to developing an ileus or chest infection. Also check for pressure ulcers
6. Check the patient has adequate analgesia and has been assessed for appropriate thromboprophylaxis
7. Ask the patient about pain and be alert to symptoms of compartment syndrome both pre- and postoperatively (early signs are pain and pain disproportionate to the injury, late signs are sensation loss, loss of movement, increased capillary refill time or impalpable pulses)
8. If the patient is diabetic, monitor blood sugars – remember diabetes impairs healing
9. Check postoperative haemoglobin and renal function
10. Check X-rays are required postoperatively for surgery that did not use X-rays intraoperatively (e.g. total hip or knee replacement). Read the operation notes for instructions about whether a check X-ray is required and review with a senior
11. For patients in traction, work with your team to know when check X-rays are required. Monitor these patients for pain, make visual checks for alignment and the health of tissue around the traction pin sites
12. Plasters may need changing (e.g. for completion of a backslab to a full plaster, different type of plaster, pain secondary to oedema, blisters or a heat reaction) – refer these patients to the plaster room
13. When appropriate involve occupational therapy and physiotherapy to help with rehabilitation

person goes to theatre at least once a week. Also liaise with your colleagues so you all get some experience of clinics, as these are a fantastic learning opportunity and your seniors will often be more than willing to teach you. Maximize your learning by reading up on common orthopaedic problems before starting the job, and do not forget to brush up on your anatomy.

13.30–14.00 Lunch

Having a break stops you flagging later in the day and boosts concentration.

14.00–17.00 Ward work

Ward work in orthopaedics will consist mainly of jobs generated from the ward round, administration (e.g. discharge summaries and take home medications) and patient reviews. Remember at the end of the day, and especially before weekends, to update the patient list and hand over to the on-call doctor any important jobs (e.g. reviews for postoperative or unwell patients).

On call

Foundation doctors in orthopaedics will have on-call commitments. These are shifts during which the foundation doctor will clerk patients referred to the on-call team and provide ward cover (after 5 pm on weekdays, all day on weekends). The orthopaedic clerking for new patients is detailed in *Figure 3*.

Patients require optimization before surgery; this includes oxygen therapy, fluid resuscitation and analgesia. Discuss unwell patients with the team before putting them on a theatre list and let the anaesthetist know if there are concerns in the morning. Check the hospital protocol regarding anticoagulation and preoperative patients; it may be necessary to reverse anticoagulation before surgery.

Nights

As part of the orthopaedic job, foundation doctors may be included in the night on-call rota. In general the night doctor's responsibilities include:

1. Clerking orthopaedic patients from accident and emergency
2. Postoperative reviews
3. Completion of jobs handed over by the day team
4. Constructing the theatre list for the following day, an example is shown in *Figure 4*.

Discuss the order of the list and whether there are any elective patients with a senior. Ensure each patient has a recent set of bloods including clotting and check for his/her meticillin-resistant *Staphylococcus aureus* (MRSA) status. Document if the patient is MRSA positive as he/she will have to go at the end of the list and consider the need for eradication therapy. According to the hospital protocol MRSA-positive patients may also require different antibiotic prophylaxis for routine operations.

Figure 3. Orthopaedic clerking.

Name, date of birth, gender, occupation, right or left hand dominant

Presenting complaint (e.g. fall at home, road traffic accident)

History of presenting complaint (e.g. mechanical fall at home, patient unable to weight bear on right leg, called ambulance)

Risk factors for fracture (e.g. smoking history, previous trauma to area, bone metabolism disorders, steroid use)

Past medical history (e.g. medical conditions that the patient sees a doctor for regularly)

Drug history, including allergies and regular medications

Past surgical history, including any problems with anaesthesia

Social history (especially whether the patient is independent, has carers, lives alone, stairs leading up to or in the home, usual mobility)

Systems review: Examine all systems, but focus on the joint or limb involved – appearance (e.g. short and externally rotated left lower limb, plaster in situ, open injuries), palpation of joint, range of movement (active and passive), neurovascular status, special tests (e.g. bulge test for knee effusions)

Impression (e.g. left hip fracture)

Management plan – for example

1. Admit, keep nil by mouth
2. Withhold anticoagulation, provide heparin cover if necessary (discuss with a senior)
3. Observations (pulse, blood pressure, temperature, respiration rate, oxygen saturations)
4. Oxygen (if required)
5. Venous access and intravenous fluids or blood (if required)
6. Intravenous antibiotics for open fractures (refer to hospital protocol for preferred antibiotics)
7. Urine dip
8. Bloods – including full blood count, urea and electrolytes, liver function tests, clotting, group and save
9. Electrocardiogram
10. X-ray – ask for both antero-posterior and lateral films, make sure the side of suspected fracture is documented, depending on the hospital protocol you may want to ask for a chest X-ray preoperatively in elderly patients
11. Mark the affected limb with a skin marker
12. Prepare consent documentation to be completed by the registrar
13. Senior review and appropriate stabilization of injury (e.g. backslab, plaster)
14. Post-manipulation X-ray request if required
15. Echo request if the patient has a previously undiagnosed murmur

Figure 4. Information required to construct the theatre list. INR = international normalized ratio.

Theatre number, name of orthopaedic surgeon, morning or afternoon session

Patient	Diagnosis	Procedure	Bloods
Mr AN Other Hospital number Date of birth	e.g. Left neck of femur fracture	e.g. Left total hip replacement	Hb, Na, K, urea, creatinine, INR

Elective theatre

Orthopaedic consultants may have an elective list during the week. This is a list of patients who have been seen in clinic and booked for an elective operation, consisting largely of procedures such as joint replacements, revisions and arthroscopies. Find out when your consultant has a scheduled elective list, and prepare for the expected patients. Patients may be clerked at a pre-admission clinic, but it is possible that they will need to be clerked on the day of admission, check this with the team. A list of patients and respective procedures can usually be found with the consultant's secretary or at the waiting list office. Use the patient details to:

1. Construct an elective theatre list
2. Check relevant blood results
3. Ensure blood has been requested for those patients requiring it.

Be early on elective theatre days and join the pre-theatre ward round. This will allow you to learn more about the patient, the nature of his/her problem and the surgery required. You can also pick up handy tips about how to consent for the future.

Conclusions

Being part of an orthopaedic firm is a unique experience. The job will be busy, but if you remain organized and work cohesively with colleagues there are ample opportunities to broaden your knowledge and skills. Take advantage of the opportunities available to explore this innovative and exciting specialty. **BJHM**

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Ahmed A, Neequaye S, Rutter P (2009) The art of the ward round. *Br J Hosp Med* **70**(5): M71–3

KEY POINTS

- Read up on common orthopaedic problems and relevant examinations before starting an orthopaedic firm.
- As an orthopaedic foundation doctor you should expect to deal with both medical and surgical problems.
- Have a system for clerking and ward rounds to avoid missing essential points.
- Teamwork will ultimately be the key to your success as an orthopaedic foundation doctor.