Orthopaedic one-stop clinics: feasible or fantasy?

A patient should wait no longer than 18 weeks from the point of referral to the start of treatment. A multidisciplinary one-stop clinic involving an orthopaedic surgeon and a radiologist provides a service encompassing clinical examination, imaging and therapeutic intervention. In order to achieve this, both specialties require teamwork and good communication to provide fast efficient care to the patient.

NHS waiting times have been the focus of government targets for a number of years. With the introduction of the 18-week referral to treatment plan, a patient should wait no longer than 18 weeks from the point of referral to the start of treatment in those situations where treatment is necessary and the patient agrees to treatment. The aim is to ensure all patients receive high quality elective care without any unnecessary wait (Department of Health, 2007). A method of achieving the above target is the implementation of one-stop or fast track clinics.

The one-stop clinic

The one-stop clinic is well described in the literature (Sandison et al, 1997; Patel et al, 2000; Johnson et al, 2008; Miller et al, 2008), providing the patient with a service encompassing clinical assessment, imaging if necessary and treatment or commencement of treatment if appropriate. For patients, a single clinical problem usually involves a GP consultation, referral to a consultant at the local hospital, or in some cases a tertiary referral centre. This can be some distance from the patient's home, with return to the hospital for imaging and a subsequent follow-up outpatients clinic appointment to discuss treatment options.

This process involves a significant amount of administration at the hospital and time for the patient. In many specialties this is entirely appropriate as many cases are extremely complex, but many orthopaedic conditions are treatable in the clinic. They often require simple non-invasive diagnostic imaging and a minimally invasive image-guided treatment or surgery. This editorial looks at orthopaedic surgery as the model for other surgical specialties.

The outpatients team

The success of an orthopaedic one-stop clinic requires a cohesive team of clerical, nursing and medical staff to ensure the process runs smoothly and is regarded by the patient as a satisfactory hospital experience. An essential member of the medical team is a skilled radiologist, familiar with both musculoskeletal radiology and image-guided treatments. The relationship between the orthopaedic surgeon and the radiologist must be one of mutual respect and understanding in order for the patient to receive the appropriate treatment.

Imaging modalities have improved dramatically over the last decade and ultrasound equipment is available in smaller units, without compromising image quality. High-field extremity magnetic resonance imaging machines are now available with field strengths of 1 T whereas only 0.2 or 0.5 T field strength extremity magnetic resonance imaging machines were available previously (Klass et al, 2007). A patient would be able to undergo a magnetic resonance imaging scan of a peripheral joint such as the knee, ankle, elbow and wrist as well as the hand and foot in the clinic, rather than attending a formal radiology appointment. This dramatic advance in technology now gives radiologists the opportunity to attend the clinic together with the orthopaedic surgeon and operate a diagnostic imaging service in an adjacent clinical room, with comparable image quality to conventional magnetic resonance imaging.

Following a consultation, the orthopaedic surgeon and radiologist are able to discuss appropriate imaging, which may involve plain film, ultrasound or an magnetic resonance imaging scan. The extremity magnetic resonance imaging scan prevents imaging of the hip and shoulder, but a significant amount of hip pathology relates to arthritis where plain film is adequate. Ultrasound provides an excellent imaging modality for shoulder and hand pathology as well as soft tissue and extremity scanning of tendons. A further benefit of ultrasound is the ability to perform image-guided interventions, which may involve aspiration of a joint, soft tissue biopsy or aspiration and steroid injection.

In most cases the consultation will be followed by imaging interpreted in the clinic and, based on this dual assessment, a treatment plan will be decided upon. This may be conservative treatment initially with medication, booking for surgery or an image-guided intervention. The close proximity of the orthopaedic surgeon and radiologist allows for immediate clinical discussion where a decision can be made. This reduces the time spent in weekly clinico-radiological meetings.

Some patients would have had a further image-guided intervention for pathological assessment or for symptom relief by steroid injection. In a small number of cases, complex imaging would be needed, such as magnetic resonance arthrography, contrast-enhanced magnetic resonance imaging or computed tomography. A further subset of patients will leave the clinic knowing that surgery is the only option and, if agreed, with a booking made for the surgical intervention.

In some cases the one-stop clinic will serve as a problem-solving platform for simple yet common clinical conditions. Scaphoid injuries are a common presentation to accident and emergency departments with poor clinical diagnostic accuracy (Thorpe et al, 1996). A normal or equivocal plain film leaves the treating doctor with no choice but to place the patient in an uncomfortable cast for a further period with a subsequent delayed plain film or further imaging by computed tomography, magnetic resonance imaging or nuclear medicine scan. The one-stop clinic provides an ideal service in this case, combining clinical examination with imaging which, in the majority of cases, is normal (Thorpe et al, 1996). A similar

scenario can be applied to soft tissue injuries of the knee such as meniscal or cruciate ligament tears with 'normal' plain films.

In each scenario the one-stop clinic will decrease the number of visits to the hospital, which improves patient satisfaction and decreases anxiety (Rochester et al, 2008).

Patient selection

Careful patient selection is essential when planning a one-stop clinic (Johnson et al, 2008) in order to decrease the number of inappropriate patient referrals to the specialist clinic. A detailed history and thorough clinical examination by the referring GP or specialist are essential for this. A good initial consultation and knowledge of orthopaedic conditions will improve the referral base to the clinic and avoid those patients with complex orthopaedic problems which are inappropriate for the one-stop clinic setting. For these patients, referral to a conventional orthopaedic clinic will avoid delays caused by lengthy consultations and avoid inappropriate patient expectation.

For neurological conditions such as entrapment neuropathies and carpal tunnel or cubital tunnel syndrome, the addition of a neurophysiology service to the clinic can further augment the productivity and once again reduce the total number of patient visits.

Pitfalls and problems

The one-stop clinic concept is not without pitfalls; the time spent in clinic removes a radiologist from important reporting duties and the productivity of the radiologist in the orthopaedic clinic is undoubtedly lower. The ongoing problem of patients not attending the clinic would mean time wasted for the radiologist. With PACS (patient archiving and communication system) available in all trusts in the NHS, this time could be spend reporting routine work, but this is less than ideal.

Patients would have to be warned about potential invasive procedures which would preclude them from driving home from the hospital. This scenario should be identified before the appointment is made and appropriate steps taken to inform the patient. The rapid time from diagnosis to treatment may not give the patient adequate time to assess all available options before treatment, but this does not seem to be a significant problem in the authors' experience.

Conclusions

Orthopaedic surgery provides an ideal platform for a one-stop clinic, combining clinical and radiological expertise to provide the patient with rapid high quality elective care. The model has been successfully trialled in other specialties such as vascular surgery (Sandison et al, 1997), breast surgery (Patel et al, 2000) and urology (Rochester et al, 2008). For the best outcome, clinics should be well planned from the point of referral with management and good communication on the day of consultation. BJHM

KEY POINTS

- All patients should receive high quality elective care without any unnecessary wait.
- One-stop clinics decrease outpatient visits.
- Careful patient selection is essential.
- Teamwork and good communication are essential in a multidisciplinary one-stop clinic.
- Extremity magnetic resonance imaging provides diagnostic images in a setting remote from the radiology department.
- Patients must be informed of possible invasive procedures before clinic attendance.

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