NICE National Institute for Health and Care Excellence

NICE guidance

Extracorporeal shockwave therapy for refractory greater trochanteric pain syndrome

HealthTech guidance

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Your responsibility

This guidance represents the view of NICE, arrived at after careful consideration of the evidence available. When exercising their judgement, healthcare professionals are expected to take this guidance fully into account, and specifically any special arrangements relating to the introduction of new interventional procedures. The guidance does not override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

All problems (adverse events) related to a medicine or medical device used for treatment or in a procedure should be reported to the Medicines and Healthcare products Regulatory Agency using the Yellow Card Scheme.

Commissioners and/or providers have a responsibility to implement the guidance, in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity, and foster good relations. Nothing in this guidance should be interpreted in a way that would be inconsistent with compliance with those duties. Providers should ensure that governance structures are in place to review, authorise and monitor the introduction of new devices and procedures.

Commissioners and providers have a responsibility to promote an environmentally sustainable health and care system and should assess and reduce the environmental impact of implementing NICE recommendations wherever possible.

Contents

This guidance replaces IPG376.

1 Recommendations

1.1 Evidence on the efficacy and safety of extracorporeal shockwave therapy (ESWT) for refractory greater trochanteric pain syndrome is limited in quality and quantity. Therefore, this procedure should only be used with special arrangements for clinical governance, consent and audit or research.

1.2 Clinicians wishing to undertake ESWT for refractory greater trochanteric pain syndrome should take the following actions.

- Inform the clinical governance leads in their Trusts.
- Ensure that patients understand the uncertainty about the procedure's safety and efficacy. In particular, patients should be informed about the possibility of pain during and after treatment, and the risk that symptoms may worsen. They should be provided with clear written information. In addition, the use of NICE's information for the public is recommended.
- Audit and review clinical outcomes of all patients having ESWT for refractory greater trochanteric pain syndrome (see section 3.1).

1.3 This procedure should only be carried out by clinicians with specific training in the administration of ESWT for refractory greater trochanteric pain syndrome and in accordance with manufacturer's instructions.

1.4 NICE encourages further research into ESWT for refractory greater trochanteric pain syndrome. Research studies should clearly describe patient selection, imaging, and treatment protocols. Outcomes should include functional and quality-of-life scores with at least 1 year of follow-up.

2 The procedure

2.1 Indications and current treatments

2.1.1 Greater trochanteric pain syndrome is a disorder that affects the (lateral) side of the hip or hips. Greater trochanteric pain may be associated with inflammation of the trochanteric bursa (also known as trochanteric bursitis). The trochanteric bursa is a small fluid-filled sac that separates the greater trochanter of the femur and the overlying fascia lata to allow smooth movement. Greater trochanteric pain may also be associated with direct injury, tendon damage, infection, differences in leg length or hip-replacement surgery.

2.1.2 Greater trochanteric pain syndrome is usually managed conservatively with rest, physiotherapy, anti-inflammatory medication and corticosteroid injections (often combined with local anaesthesia). In patients refractory to conservative treatments, surgical options such as supratrochanteric fasciotomy or trochanteric bursectomy may be used.

2.2 Outline of the procedure

2.2.1 Extracorporeal shockwave therapy (ESWT) is a non-invasive treatment in which a device is used to pass acoustic shockwaves through the skin to the affected area. Ultrasound guidance can be used to assist with positioning of the device.

2.2.2 ESWT may be applied in one or several sessions. Local anaesthesia may be used because high-energy ESWT can be painful. Different energies and frequencies of shockwaves can be used.

2.2.3 The mechanism by which this therapy might have an effect on greater trochanteric pain syndrome is unknown.

2.3 Efficacy

Sections 2.3 and 2.4 describe efficacy and safety outcomes from the published literature that the Committee considered as part of the evidence about this procedure. For more detailed information on the evidence, see the overview.

2.3.1 A non-randomised comparative study of 229 patients treated by several ESWT sessions (n=78), a single local corticosteroid injection (n=75) or 'home training' (n=76) reported that the percentage of patients who had either recovered completely or had improved symptoms (assessed using a 6-point Likert scale) following ESWT were 13% (10 out of 78) at 1 month, 68% (53 out of 78) at 4 months and 74% (58 out of 78) at 15 months. In the corticosteroid injection group, 75% (56 out of 75) of patients reported complete recovery or improved symptoms at 1 month, 51% (38 out of 75) at 4 months and 48% (36 out of 75) at 15 months. In the home-training group, 7% (5 out of 76) of patients reported complete recovery or improved symptoms at 1 month, 41% (31 out of 76) at 4 months and 80% (61 out of 76) at 15 months.

2.3.2 The non-randomised comparative study of 229 patients reported significantly higher mean pain scores (measured on a visual analogue scale from 0 to 10; 10 indicates worst conceivable pain) in the ESWT (5.6) and the home-training groups (5.9) compared with the steroid injection group (2.2) at 1 month ($p<0.001$). However, at 15 months, the scores were 2.4 after ESWT, 2.7 after home training and 5.3 after injection ($p<0.001$). All groups had similar pain scores at baseline (range 5.8 to 6.3).

2.3.3 The non-randomised comparative study of 229 patients reported that 64% (50 out of 78) of patients in the ESWT group, 49% (37 out of 75) in the steroid injection group and 34% (26 out of 76) in the home-training group had returned to previous sporting or recreational activity at 4 months (ESWT versus home training, $p<0.001$).

2.3.4 The Specialist Advisers listed key efficacy outcomes as recovery measured on a 6-point Likert scale, severity of pain measured using a visual analogue scale and improved function.

2.4 Safety

2.4.1 Increased pain for more than 1 day was reported in 3% (2 out of 78) of patients treated by ESWT, 24% (18 out of 75) treated by steroid injection and 20% (15 out of 76) treated with home training in the non-randomised comparative study of 229 patients.

2.4.2 Skin irritation during the first month of follow-up was reported in 33% (26 out of 78) of patients treated by ESWT and 3% (2 out of 75) treated by steroid injection in the non-randomised comparative study of 229 patients.

2.4.3 The Specialist Advisers considered theoretical adverse events to include pain, tendon rupture, haematoma and nerve damage.

2.5 Other comments

2.5.1 NICE received 30 completed questionnaires from patients treated by the procedure. Thirty percent (9 out of 30) stated that they would not have ESWT again; 3 of these patients reported that the procedure had made their condition worse with increased pain and decreased mobility. The remaining 70% (21 out of 30) of patients would recommend this procedure to others.

3 Further information

3.1 This guidance requires that clinicians undertaking the procedure make special arrangements for audit. NICE has identified relevant audit criteria and has developed an audit tool (which is for use at local discretion).

Update information

Minor changes since publication

January 2026: Interventional procedures guidance 376 has been migrated to HealthTech guidance 248. The recommendations and accompanying content remain unchanged.

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Endorsing organisation

This guidance has been endorsed by Healthcare Improvement Scotland.