

JOINT AND PERIARTICULAR THERAPEUTIC STEROID INJECTION THERAPY**PRIMARY CARE CLINICAL GUIDELINE****1. PRE-AMBLE**

Therapeutic steroid injection is a safe and effective intervention for a wide variety of musculoskeletal disorders, and should be offered to appropriate patients within the framework of a multi-modal treatment strategy. (1) This guideline is produced in response to very wide variance in the rate of intervention across different primary care contractors. It is recognised that this variance may represent differing skill levels between GPs, rates of referral to interface or secondary care services, and practice demographics. It is not the intention of the authors to remove the role of clinical judgement in individual cases, but there is a need to standardise the criteria for injection therapy.

2. OBJECTIVES

2.1 This guidance aims to:

- establish general clinical guidance for the provision of therapeutic steroid injection;
- provide specific guidance regarding equipment and facilities which are required to provide a therapeutic injection service;
- provide specific guidance regarding the types of injection most commonly administered in primary care;
- in doing so ensure equity of access to evidence-based and safe therapeutic injection services for all patients across the PCT cluster.

3. GENERAL GUIDANCE FOR THERAPEUTIC INJECTION

3.1 GPs administering therapeutic steroid joint injection therapy will have excellent clinical assessment skills and be able to make a definitive diagnosis prior to the administration of a therapeutic substance. New GPs wishing to undertake therapeutic steroid joint injection therapy will have been trained to do so and be able to demonstrate their competency as required. GP trainers teaching therapeutic steroid joint injection therapy will have attended an accredited course. GPs administering therapeutic steroid joint injection therapy will attend updates/training in joint assessment and diagnosis skills and administration of this therapy to maintain their knowledge and skills. It is recommended that there be regular peer review and audit of clinical outcomes to inform future practice.

- 3.2 A clearly documented and adequately detailed history and examination is the minimum required to arrive at an accurate diagnosis and sometimes additional investigations will be required, at the practitioner's discretion, to further aid the diagnostic process. Accurate diagnosis is important as it helps direct injection therapy towards the correct anatomical structure, and is likely to reduce the chance that injection therapy will be used for conditions that are not known to benefit from this mode of treatment.
- 3.3 The full range of treatment options for the underlying lesion should be explained to the patient including oral analgesia, oral non-steroidal anti-inflammatory drugs, topical non-steroidal anti-inflammatory drugs, guided home exercise programmes, lifestyle change, physiotherapy, therapeutic injection, and surgical treatments.(2)This discussion should include an analysis of the risk/benefit profile of each treatment option for the individual patient.
- 3.4 Injection therapy should not be used alone, but as part of a multi-modal treatment strategy to include some of the above treatments eg: home exercise, physiotherapy and lifestyle change.(2)
- 3.5 In most patients injection therapy will be most appropriately offered after a trial of more conservative treatments such as those mentioned above. However, it is recognised that the risk profile for a given treatment varies significantly between patients and in some it may be appropriate to offer injection therapy earlier in the pathway, for example if non-steroidal anti-inflammatories would be unsafe for them to take. Also, in some conditions therapeutic injection may be more effective offered earlier in the natural history, e.g. acute tendonitis, adhesive capsulitis.
- 3.6 Should a clinician feel that a patient is likely to benefit from injection therapy but lacks the competence to do this themselves then the patient should be referred to a competent colleague within the practice, or if this is not possible referred to interface or secondary care services within an agreed pathway.
- 3.7 Informed verbal consent should be obtained from patients prior to intervention, and documented in the clinical record. In particular their attention should be drawn to the following risks: (3,4)
- infection/septic arthritis;
 - bleeding/haemarthrosis;
 - injection/post-injection pain;

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- damage to neighbouring structures depending on injection site, eg: tendon rupture or neurovascular injury;
- adverse reaction to injected drugs;
- vasovagal syncope (at time of procedure or shortly afterwards)
- recurrence of symptoms;
- failure of treatment;
- steroid induced lipo-atrophy/skin de-pigmentation;
- systemic corticosteroid side effects.

3.8 Patients should be advised to contact the treating clinician if they experience any adverse reaction. As a minimum the treating clinician should be made aware of any adverse reactions if the patient is unable to contact them directly.

3.9 Care should be taken at all times to keep steroid load to a minimum. It is envisaged that patients requiring repeat injections should not have more than 3 injections per year except in exceptional circumstances. (5)

3.10 Appropriate Patient Information should be available including advice on how long to rest, appropriate rehabilitative exercises and what action to take if there is an adverse reaction to the treatment.

3.11 Clinicians should have a system in place whereby patients whose symptoms do not improve after an injection can attend for clinical review. If an injection's effect is of limited magnitude or duration then they should consider alternative diagnoses, or whether a different treatment would be more appropriate. Rather than continued primary care management, it may be more appropriate for the patient to see a specialist or interface service with a view to confirming the diagnosis, or for consideration of more invasive intervention. (2) Surgical treatments are associated with a higher level of complications than therapeutic injection, but especially for degenerative disorders may offer longer-lasting or permanent resolution of symptoms, and avoid the need for the significant steroid load associated with repeated therapeutic injection.

3.12 There are a wide variety of drugs and drug combinations on the market.

- Triamcinolone acetate is available for use in the smallest volumes so is likely to cause the least post injection pain due to reduced tissue distension. (6) It is less soluble and is therefore more suitable for deeper injections such as knees and shoulders where it is less likely to cause steroid-induced lipo-atrophy;

- The more superficial injections, eg carpal tunnel and superficial tendon sheath injections, are more likely to cause steroid induced lipo-atrophy and as such a more soluble, short acting preparation such as hydrocortisone acetate is preferred; (7)
- Most injections require a diluent for the steroid and it is usually appropriate to use a local anaesthetic for this purpose. 1% lidocaine is preferred as it has a quicker onset of action, often giving the clinician confirmation of correct injection placement. (6) There are no longer term benefits to using alternatives such as bupivacaine, which is more costly. (8,9)

4. SPECIFIC GUIDANCE REGARDING FACILITIES AND EQUIPMENT

4.1 Rooms used for injection therapy should be able to be easily cleaned and should have a couch, and a work surface for injection preparation that is easily cleaned between patients.

- Rooms used for injection therapy should have hand washing facilities.
- Rooms used for injection therapy must have appropriate waste disposal facilities including a clinical waste bin and a sharps bin within easy reach of the injection area.
- Appropriate antibacterial skin-prep should be available to reduce chance of infection. If a no-touch technique is not to be used, sterile dressing – packs and appropriately sized sterile gloves should also be available in order to maintain a sterile field.
- Resuscitation equipment including an anaphylaxis pack should be available within the building, along with a second person to assist with resuscitation, who should have received recent BLS training.

5. SPECIFIC SITE-RELATED GUIDANCE.

5.1 The specific techniques for carrying out injections are best learnt at the bedside from an expert, with a good manual or textbook as a back-up guide. There are some excellent courses, *websites* and texts available for this purpose, and this guidance does not seek to reproduce these. It does however seek to offer guidance about the indications for some of the more common injections. There is a lack of adequate data regarding the most commonly performed injections in primary care. However, expert opinion suggests that the most commonly performed injections in primary care are likely to be the following:

Knee Joint Injection

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- Injection of the knee joint can be considered in the management of osteoarthritis of the knee. (10)
- Clinical examination +/- plain radiographs should confirm the diagnosis before injection treatment and more conservative measures should have been offered first, unless inappropriate.
- Appropriate severity scoring tools should be used as part of the assessment, and in suitable patients referral for consideration of surgical treatment should be offered. (2,11)
- The role of injection therapy is to defer the need for surgery if the patient wishes to do so, or to relieve symptoms in those who are unsuitable for surgery and in whom conservative measures have failed.

Glenohumeral Joint Injection

- Injection of the glenohumeral joint can be considered in the management of osteoarthritis of the glenohumeral joint, or adhesive capsulitis.
- Clinical examination +/- plain radiographs should confirm the diagnosis of osteoarthritis or a capsular problem before injection treatment and more conservative measures should have been offered first.
- In suitable patients, referral for consideration of surgical treatment should be offered.
- The role of injection therapy in osteoarthritis is to defer the need for surgery if the patient wishes to do so, or to relieve symptoms in those who are unsuitable for surgery and in whom conservative measures have failed.
- If the clinical findings are consistent with adhesive capsulitis, glenohumeral injection should be used in conjunction with physiotherapy/home exercise programmes.
- The role of injection therapy in adhesive capsulitis is as an adjunct to rehabilitation.

Subacromial Injection

- Subacromial injection can be considered in the management of impingement/rotator cuff syndrome;

- Clinical examination should confirm signs of impingement or rotator cuff dysfunction, and more conservative measures including physiotherapy should have been offered first;
- Care should be taken to ensure that the underlying lesion is likely to benefit from injection, and this may involve early use of dynamic ultrasonography to determine muscle/tendon architecture. (12,13);
- Clinicians should have a low threshold for referring patients with large or full thickness rotator cuff muscle or tendon tears to a surgeon, especially if they are normally active;
- The role of injection therapy in impingement/rotator cuff syndrome is as an adjunct to rehabilitation.

Epicondylitis of the Elbow Injection

- The treatment of choice for medial and lateral epicondylitis is physiotherapy. (14,15);
- There is a role for injection therapy in medial and lateral epicondylitis but only as part of a multimodal treatment strategy and repeated injections should be avoided.

Trochanteric Pain Syndrome

- Trochanteric pain syndrome is a common problem;
- Treatment strategies include rest, analgesia and non-steroidal anti-inflammatories;
- Physiotherapy support for stretching and gait assessment is valuable;
- There is a small amount of low quality evidence that therapeutic injection is of benefit in this condition, and so it should be offered to suitable patients. (16)

6. REFERENCES

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