

Cortisone Injections

Background

- Cortisone refers to a group of medications collectively known as corticosteroids
- These medications are strong anti-inflammatory agents, and hence, are used to treat regions of the body where inflammation is the primary cause of pain
- At Berera Radiology, we most commonly use Celestone (Betamethasone), and less commonly, Depot-Medrol (Methylprednisolone)
- These are legal medications, and are not to be confused with anabolic steroids.

Indications

- Cortisone injections are recommended to assist with symptoms secondary to inflammation:
 - Arthritis: any joint may be affected
 - Bursitis: typically, the shoulder (subacromial) and hip (trochanteric)
 - Tendinosis or tenosynovitis: typically, the elbow, wrist, finger or heel
 - Nerve: typically, sciatica
 - Other: ganglion cyst, popliteal cyst, adhesive capsulitis ("frozen shoulder"), etc.

Mode of Administration

- Typically, under ultrasound or CT guidance
- Antiseptic is applied to the skin
- Often local anaesthetic is injected into the skin and deeper soft tissues
- The needle is placed into or adjacent to the structure of interest
- A small concentrated volume of steroid is injected into the region / structure causing pain, thus minimizing the larger doses of oral steroid otherwise required. This also minimizes potential systemic side effects
- If a fluid structure is to be injected with cortisone (e.g. Bursa, cyst), fluid aspiration will be attempted immediately prior
- It is not uncommon for the injection to sting for 10 – 30 seconds
- More intense discomfort may be experienced if:
 - There is severe underlying inflammation
 - The region of interest is exquisitely tender to pressure
 - If access is difficult, in needle manipulation is required

Benefits and Risks

- Any procedure administering medication carries an inherent risk
- Your referring doctor and treating radiologist will consider the appropriateness of a cortisone injection, and ensure that the expected benefit from the procedure far outweighs any associated risk
- Occasionally, a diagnostic steroid injection is performed, to determine if a suspected body region is the cause of pain

Potential Side-Effects

- Allergy, to any of the materials used during the procedure e.g. antiseptic, local anaesthetic, cortisone, dressing
- Cortisone can cause facial flushing, hot flushes, palpitations, mild mood disturbance or insomnia. These symptoms typically subside within 24 hours
- Local bruising and tenderness
- Focal skin and subcutaneous (deeper soft tissue) atrophy resulting in skin dimpling
- Hypopigmentation (whitening of the skin) at the site of injection, most common in the palm of the hand or the sole of the feet
- Infection is a rare (1-2%) but potentially serious complication
 - The majority are minor infections, treated with oral antibiotics
 - Serious infections can occur (<0.1%), and are of particular concern if they involve a joint, and may require hospitalisation and intravenous antibiotics.
 - Infection typically takes 48 hours to manifest, and hence pain, redness or swelling at the injection site requires urgent medical attention – please contact your doctor, or Berera Radiology
- Fluctuation of blood glucose levels in patients with diabetes for several days, and up to one week, and close monitoring of BSL is recommended
- Transient increase in pain at the site of injection, as the local anaesthetic wears off (within hours), and the time taken for the steroid to commence working (typically 24-48 hours). Management typically includes cold pack/ice, paracetamol and anti-inflammatory medication
- Tendon damage, only if the tendon is directly injected, which has been reported to weaken the collagen fibres, and result in delayed rupture. Hence, cortisone is only injected into the soft tissues surrounding a tendon, and rest is advised for one week post injection to preserve tendon integrity

Alternative Treatments

- Cortisone injections are an optional procedure, and are only recommended following appropriate history taking and examination by your referring doctor
- Rest, anti-inflammatory medications, physiotherapy and exercise may be beneficial as primary treatment options, or as adjunct therapy