Cervical Radiculopathy

- Most commonly caused by degenerative disc disease as a consequence of ageing and can cause:
  - loss of disc space height
  - loss of foraminal area
  - herniated intervertebral disc
  - protruding osteophytes
- Can result in significant pain, instability, radiculopathy, myelopathy, or a combination of symptoms
- Radiculopathy occurs as a result of nerve root compression, whereas myelopathy occurs due to compression of the spinal cord
- NB: myelopathy is a red flag and if suspected should be referred urgently for investigations and further assessment

**Clinical presentation**

**Examination**

**Neurological features associated with cervical radiculopathies**

**RED FLAG!**

**Refer urgently to appropriate specialist**

**Management - nerve root/radicular pain WITH neurological signs**
- Refer to MSK Triage

**Management - nerve root/radicular pain WITHOUT neurological signs**
- Initial Self-management
  - Drug Titration and Review of Neuropathic Pain
- If pain persists for 6 weeks or longer refer to physiotherapy
  - Physiotherapy management – if patient does not respond after 6 weeks, physio to refer to MSK Triage

**MSK triage referral**
- Assessment by ESP
- Self-management / life style advice
- Investigations as required
- MDT discussion with spinal surgeon, pain consultant and consultant psychologist
- Signposting to other MSK provision e.g. pain /physio
- Onward referral to secondary care if required

**Referral by MSK triage to pain/spinal or other service as required**
Clinical presentation

- neck pain that radiates to an upper limb:
  - usually unilateral but may be bilateral
  - may be severe enough to wake patient at night
  - C5 to T1 are most commonly affected – C1 to C3 may be affected and cause retro-orbital and temporal pain which can mimic giant cell arteritis
- onset is usually gradually, but can be abrupt
- neurological features:
  - follow a segmental distribution in the arms
  - sensory symptoms:
    - shooting pains
    - numbness
    - hyperaesthesia
  - motor symptoms – less common

The most common clinical findings of patients with cervical radiculopathy include:

- arm pain, neck pain, scapular, or periscapular pain
- paresthesias
- numbness
- weakness
- abnormal deep tendon reflexes

A diagnosis of cervical radiculopathy should still be considered with atypical findings as they are often present and can improve with treatment:

- deltoïd weakness
- scapular winging
- weakness of the intrinsic muscles of the hand
- chest, or deep breast pain
- headaches
Examination

Signs of cervical radiculopathy:
- postural asymmetry:
  - the head may be held to one side or flexed – decompresses the nerve root
  - atrophy may be present if asymmetry is long-standing
- neck movements:
  - presence of restriction
  - presence of sharp pain that may radiate to the arms, especially on extension, bending, or turning to the affected side
- dural irritation:
  - evaluate using the Spurling test in those with clinical signs and symptoms consistent with cervical radiculopathy:
    - flex the neck laterally and rotate, and then press on the top of the patient's head
    - a positive result occurs if the pressure causes typical radicular arm pain
- neurological signs:
  - upper limb weakness
  - paraesthesia
  - dermatomal sensory or motor deficit
  - diminished tendon reflexes
  - NB: nerve root symptoms normally arise from a single nerve root and involvement of more than one suggests a more widespread neurological disorder

NB: look out for signs of myelopathy -
- hyperreflexia
- hypertonia
- clonus
- upgoing plantars
RED FLAG

If any of the following conditions are suspected, refer urgently to secondary care for investigations and further assessment:

- myelopathy (compression of the spinal cord). This typically presents with deterioration in gait or manual dexterity/fine motor function (usually bi-lateral)
- associated weakness
- malignancy
- infection or inflammation
- severe trauma or skeletal injury
- vascular disorders

Seek immediate specialist advice if the person has severe or progressive motor weakness, or severe or progressive sensory loss.
**Neurological features associated with cervical radiculopathies**

Neurological features of cervical radiculopathies typically follow a segmental distribution in the arms and C5 to T1 are most commonly affected. Retro-orbital and temporal pain suggest referral from the upper cervical levels (C1 to C3) and can mimic giant cell arteritis.

**C5 nerve root affected:**
- shoulder abduction/flexion and/or elbow flexion muscle weakness
- reflex changes in biceps/supinator
- lateral arm and forearm, sensory changes

**C6 nerve root affected:**
- elbow flexion and/or wrist extension muscle weakness
- reflex changes in biceps/supinator
- lateral forearm, thumb, and/or index finger sensory changes

**C7 nerve root affected:**
- elbow extension, wrist flexion, and/or finger extension muscle weakness
- reflex changes in triceps
- index/middle finger sensory changes and dorsum of forearm

**C8 nerve root affected:**
- finger flexion muscle weakness
- no reflex changes
- medial side lower forearm, ring and/or little finger sensory changes

**T1 nerve root:**
- finger abduction and adduction muscle weakness
- no reflex changes
- medial side upper arm/lower arm sensory changes

NB: The presence of pain or paraesthesia radiating into the arm is not specific for nerve root pain
Information for patients


MSK triage service patient information leaflet - http://www.enhertsccg.nhs.uk/

Managing Pain, link to leaflet: https://www.arthritiscare.org.uk/living-with-arthritis/managing-pain-and-fatigue

Nonspecific Neck Pain from Patient UK: http://patient.info/health/nonspecific-neck-pain

Torticollis from Patient UK: http://patient.info/health/torticollis-leaflet


Cervical Spondylosis from Patient UK: http://patient.info/health/cervical-spondylosis-leaflet

Neck pain from NHS Choices: https://www.nhs.uk/conditions/neck-pain-and-stiff-neck/
Referral information for HCT MSK Triage Service

The administration team are based at the New QE2 hospital.

Appointments and General Enquiries: 01707 247411 or 01707 247412 or 07884 547579

E-referral enquiries via the MSK e-referral administration on: 01707 247416 or 07884 547579

Referral to the service is via the NHS e-referral system (previously Choose and Book). Electronic screening of referrals takes place on a daily basis by clinicians. The referrals are either referred directly to secondary care where they manage the Choose and Book process, or seen for clinical assessment by the team to decide the appropriate pathway of care.

Clinics for assessment are held at The New QE2, Hertford County Hospital, Cheshunt Community Hospital and Lister Hospital.

The MSK Triage Service and the MSK Physiotherapy Service are both part of the whole integrated HCT MSK Service, and as such can refer directly to each other as appropriate.

The MSK Physiotherapy Service is a team of therapists specialised in the treatment and management of MSK Conditions and based over 6 sites in East and North Herts. (Referral for this team is via generic email – mskphysio.enherts@nhs.net).

The MSK Triage Service is a team of ESP (Physiotherapists by background) but with training and advanced skills for specialist assessment, referring for diagnostics and providing injection therapy. This team meets regularly for 3 MDT meetings with the appropriate Consultant Surgeons for the upper limb, lower limb and spine. Complex cases are discussed at these meetings to provide integrated care as necessary.