

# Lacerations with nerve involvement

## First aid treatment and referral pathways

- For all first aid measures see Hand Injury Triage guidelines at [https://www.bssh.ac.uk/hand\\_trauma\\_app.aspx](https://www.bssh.ac.uk/hand_trauma_app.aspx)
- Referral category green – The patient should be seen in the next available soft tissue hand clinic, (preferably within 24 hours).

## Consent – principle of shared decision making

- Discussion with the patient should include all options, an outline of their rehabilitation requirements for each option, and the likely outcomes
- The patient's values, occupation and hand function requirements should be discussed and considered in a joint decision making process
- Examples of this:
  - Whether to repair a common digital nerve in a patient with little chance of nerve recovery or neuroma formation (i.e. age related poor nerve re-growth) who has significant comorbidities

## Decision making documentation

- The factors that have been considered in making a management decision should be documented, particularly where the surgeon and patient have agreed an option that might not be a common approach

## Non-operative management options

When non-operative management has been selected the patient should be given access to a competent hand therapist for desensitisation therapy and mobilisation.

## Operative management requirements

### Timing

- Within 4 days

### Staff

- Done by a surgeon who is competent in microsurgical nerve repair
- The ODP/scrub nurse should be familiar with microsurgical instrumentation

### Environment

- Nerve repair be carried out in a designated operating theatre

### Equipment

- Light
- Hand surgery instrumentation
- A microscope should be available to the surgeon. In digital nerve cases loupe magnification may be acceptable if the surgeon chooses
- When needed, tourniquet and the associated infrastructure

### **Additional measures**

- The use of pharmacological agents to reduce nerve pain should be considered, and where appropriate started early

### **Therapy requirements**

- Access to a competent hand therapist who will provide an extended period of support and advice on desensitisation, sensory re-education and maintenance of passive ROM where motor nerves are involved
- The first visit to a therapist after surgery should take place in 5-7 days, before adhesions become established

### **Outcomes to be expected**

The range of injuries is too great to have a meaningful outcome expectation for all nerve injuries

### **Audit**

- Regular or rolling audits of
  - Infection rate
  - Rate of re-operation, e.g. neurolysis, graft
  - Neuroma, neuralgia or CRPS formation at 6 months
  - Extent of functional recovery
  - Ability to return to work

### **References**

Dunlop RLE, Wormald JCR, Jain A. Outcome of surgical repair of adult digital nerve injury: a systematic review. *BMJ Open* 2019, **9**:e025443. doi: 10.1136/bmjopen-2018-025443

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