Standards of hand therapy practice in the rehabilitation of surgically and non-surgically managed closed fractures of the hand

Endorsed by:
British Association of Hand Therapists

Devised by the Closed Fractures Standards Working Group, 2022
Further information is available from: https://www.hand-therapy.co.uk

This BAHT Standard has been developed to compliment the respective BSSH Standard of Care in Hand Trauma. It is based on research and expert opinion.

Definition:

These standards relate to the treatment of closed fracture injuries of the hand. This includes middle phalangeal, proximal phalangeal and metacarpal fractures. 5th Metacarpal fractures and distal phalanx fractures form separate BAHT standards.

Closed hand fractures are common and can result in pain and significant disability. The main goal for treating fractures is to protect and maintain the integrity of the healing fracture and regain a mobile and functional hand.

Standards :

Non-operative management

1. Closed hand fractures managed non-operatively should be referred to a specialist hand therapist or appropriately trained therapist with direct access to specialist support as required for therapy assessment and formulation of a treatment plan within 7 days of their initial presentation.

Non-operative fracture management is a balanced clinical decision where it is deemed to offer a better or the equivalent outcome to that of surgical intervention. Or surgical intervention is not appropriate due to other healthcare needs or patient choice.

Surgical management

2. Following surgery patients should be referred to a specialist hand therapist (or appropriately skilled therapist with access to specialist support as

required) for therapy assessment and formulation of a treatment plan within 5 to 7 days of their surgery. The treating hand therapist must have access to the

patients' operation note and have direct contact access to the referring hand surgeon or therapist to discuss any concerns.

Assessment (initial and ongoing) and treatment for conservatively managed fractures.

3. **Patient information:** Patients should be provided with appropriate information through verbal and written and/or electronic information. This should support patient understanding of the healing process, rehabilitation and likely prognosis.

It is essential that the treating hand therapist understands the patients' needs and goals from an early stage and incorporates this in their treatment regimen. Work should be discussed with all patients, and for those in work, an AHP Health and Work Report may be provided by the treating hand therapist to support a period off work and/or appropriate work modification [1]

4. **Splinting:** Fracture protection may include a support, splint, buddy-strapping or cast. The design of each will depend on fracture stability and may evolve with fracture healing [2]. Where possible the least restrictive splint should be employed allowing movement of any un-injured/un-splinted joints, as appropriate for the stability of fracture and patient demands. Splints should be remoulded and adapted for the patient to minimise the use of plastic or other splinting material.

Splint wearing regimens will be directed by the treating hand therapist, based on fracture healing timeframes and should be avoid prolonged immobilization due to the effects on the surrounding joints and soft tissues [2].

5. **Mobilisation regimen:** The post-operative and non-operative regimen of choice should include early controlled and safe mobilisation while maintaining integrity/stability of the fracture during the healing process.

6. **Oedema management:** Patients should be offered early oedema treatment modalities to reduce pain, improve mobility and reduce risk of delayed healing. This may include elevation and compression.

7. **Outcome measures:** Outcome measures should be taken as a core data set and repeated at the point of discharge. Range of motion should be measured regularly, using an accurate standardised technique, and should be compared to the contralateral hand. Treatment strategies to manage any developing contractures, or other restrictions to range of movement, should be initiated early.

Grip/pinch strength should also be assessed using a standardised technique and compared with the other hand and established normal values.

At least one patient reported outcome measure should be used, for example PSFS or COPM, DASH or QuickDASH [3] https://dash.iwh.on.ca/

8. **Complications:** The treating hand therapist should be competent in assessing and identifying any concerns or complications. These should be escalated via the appropriate local pathway to the named consultant. Regular monitoring and early identification of issues (for example, fracture non-union or mal-union, CRPS, joint contractures, tendon adhesions and scar sensitivity) is a key component of the hand therapy role.

Assessment (initial and ongoing) and treatment- specific consideration for surgically managed fractures.

9. **Wound care**: The treating hand therapist should be able to identify signs of infection and manage post-operative wounds and pin sites in accordance with locally agreed pathways and/or refer on to wound clinic as required.

10. **Scar management:** Post-operative patients should be offered scar management advice[4], education and modalities to reduce post-operative scar adhesions, for example, silicone gel [4,6] paper tape [7,8] and massage [9].

Follow-up

11. **Outpatient appointments:** Patients should be offered timely and regular follow up incorporating patient choice of appropriate delivery methods. Frequency of appointments will depend on the needs of the patient. A patient initiated follow-up option should be considered and, where appropriate, offered to patients to enable a route back into the service within a specified timescale.

Research and audit

12. Regular in-house audits should be completed to compare local practice to that of national standards and may incorporate an evaluation of patient outcomes, resource use, treatment effectiveness, pathways, patient satisfaction, provision of patient information and complication rates.

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