Ashford and St. Peter's Hospitals
NHS Foundation Trust

Guideline for the Management of Fingertip injuries in Paediatric ED

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Guideline History		
Date	**Comments**	**Approved By**
Written by Dr Marc Barton 2013	Reviewed by Dr Erin Dawson 2017 Reviewed and transcribed into Trust format by Dr Erin Dawson 2022	Paediatric Guidelines Group

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Guideline for the management of Fingertip injuries in Paediatric ED

Introduction

Fingertip injuries are common in children, usually crush injuries from getting them trapped in doors or hinges. Younger children will often need a general anaesthetic to have the injury repaired, and this guideline aids the management and appropriate referral of such injuries.

MANAGEMENT OF FINGERTIP INJURIES

Fingertip injuries occur very commonly in the Paediatric ED setting. Fingers trapped in doors or hinges being the most common cause.

A fingertip injury is defined as any soft tissue, nail or bony injury distal to the dorsal and volar skin crease at the distal interphalangeal joint.

Anatomical considerations:

The fingertip is divided into 3 anatomical parts. An understanding of this will help description of injuries when referral to Plastics at distal sites is necessary:

1. The pulp: dense fibrous layer under the epidermis of the entire fingertip. This helps to support the distal phalanx.
2. The nail: protective plate over the nailbed
3. Distal phalangeal bone: intergral supporting structure of the fingertip

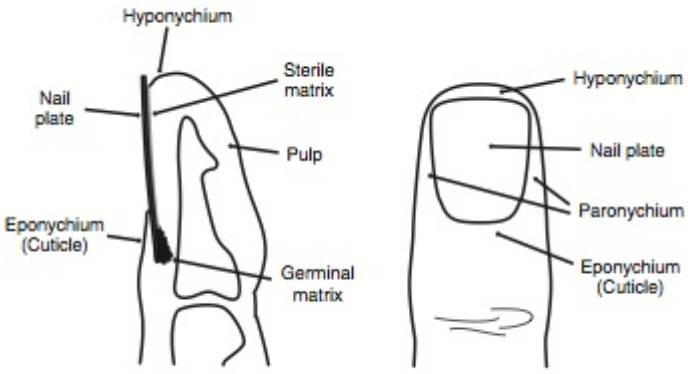

Figure 1. Anatomy of fingertip.

Assessment of the injury:

The following key history points should be obtained and recorded as part of the assessment:

- Mechanism of injury
- Hand dominance
- Length of time since injury
- Ischaemic time if fingertip amputation has occurred
- Tetanus status

The fingertip should be examined for the following:

- The size and location of any pulp defect
- Presence and extent of any nail bed injury
- Presence of nail avulsion
- Presence of subungal haematoma
- Presence of exposed bone

Investigations:

All fingertip injuries should be X-rayed to look for underlying fractures, foreign bodies and to assess bone loss in the case of amputations.

Management:

1. Analgesia

A child with a fingertip injury is likely to be distressed and in considerable pain. Give prompt simple analgesia (paracetamol and ibuprofen). In severe cases consider using the departmental protocol for intranasal diamorphine/fentanyl and/or inserting a ring block. In younger children where a ring block in impractical dripping 1% lidocaine onto lacerations or nailbed injuries can be helpful.

2. Pulp avulsion injuries

Achieving haemostasis is a priority and can be difficult due to the vascularity of the pulp. Irrigate and elevate the digit and apply a pressure dressing. Significant avulsions should be discussed with the Plastic surgeon on-call at Wexham Park Hospital.

3. Nail avulsion and nailbed lacerations

It is uncommon for nail avulsion to occur without a co-existing nailbed laceration and all nail avulsions should be carefully assessed for this. The area should be irrigated and dressed. If the nail is intact it can be splinted onto the nail fold to provide temporary protection. Nailbed lacerations should be repaired to avoid subsequent abnormal nail growth, therefore all nailbed lacerations should be referred to the Plastic surgeon on-call at Queen Victoria Hospital, East Grinstead, or SGH.

4. Subungal haematomas

A subungal haematoma occurs when there has been bleeding underneath the nail. These injuries should be managed according to the level of pain experienced by the child. Children experiencing mild pain can be managed conservatively with oral analgesia and splinting. Moderate to severe pain should be treated with trephination. This can be performed by rolling a 21 gauge needle and applying downwards pressure onto the nail until the nail is penetrated and the pressure released. Afterwards the finger should be dressed and healing will generally occur within 5-7 days.

5. Amputation

The area should be thoroughly irrigated and dressed. The amputated digit should be wrapped in sterile gauze that has been moistened with 0.9% saline. Place the digit in a sealed watertight bag and then place the bag in ice. The time that the digit was placed on ice should be recorded in the notes. Contact the on-call Plastic surgeon at SGH urgently and prepare for a priority transfer of the child.

6. Antibiotics

Often the Plastic surgeons will want the child to receive prophylactic antibiotics prior to transfer for the various injuries described above. This should be discussed with them on a case by case basis.

7. Tetanus

In cases where there is not adequate tetanus cover, vaccination may be required. In the case of dirty, tetanus prone wounds tetanus immunoglobulin may be required. Please refer to local tetanus guidelines.

1. Supporting References

http://trustweb.asph.nhs.uk/docsdata/paed/Guidelines_Paediatrics/SOP%20Intranasal%20Analgesia%20Sep%202020.pdf

Fingertip Injuries - StatPearls - NCBI Bookshelf (nih.gov)

2. Supporting relevant trust guidelines

None available

2. Guideline Governance

a. Scope

This guideline is relevant to all staff caring for all children from 0-18 years old across the emergency department, inpatient ward and outpatient department.

b. Purpose

i. This guidelines aims to facilitate a common approach to the management of children. At times deviation from the guideline may be necessary, this should be documented and is the responsibility of the attending consultant.

ii. This guideline is subject to regular review to ensure ongoing evidence based practice.

c. Duties and Responsibilities

All healthcare professionals responsible for the care of all children 0-18years should be aware of practice according to this guideline.

d. Approval and Ratification

This guideline will be approved and ratified by the Paediatric Guidelines Group.

e. Dissemination and Implementation

i. This guideline will be uploaded to the trust intranet 'Paediatric Guidelines' page and thus available for common use.
ii. This guideline will be shared as part of ongoing education within the Paediatric Department for both medical and nursing staff.
iii. All members of staff are invited to attend and give comments on the guideline as part of the ratification process.

f. Review and Revision Arrangements

a. This policy will be reviewed on a 3 yearly basis by the appropriate persons.
b. If new information comes to light prior to the review date, an earlier review will be prompted.
c. Amendments to the document shall be clearly marked on the document control sheet and the updated version uploaded to the intranet. Minor amendments will be ratified through the Paediatric Guidelines Group. A minor amendment would consist of no major change in process, and includes but is not limited to, amendments to documents within the appendices.

g. Equality Impact Assessment

Background • Who was involved in the Equality Impact Assessment
Author and the supervising consultants.
Methodology • A brief account of how the likely effects of the policy was assessed (to include race and ethnic origin, disability, gender, culture, religion or belief, sexual orientation, age) • The data sources and any other information used • The consultation that was carried out (who, why and how?)
All groups of staff and patients were taken into consideration and there is no bias towards or against any particular group.
Key Findings • Describe the results of the assessment • Identify if there is adverse or a potentially adverse impacts for any equalities groups
There is no evidence of discrimination.
Conclusion • Provide a summary of the overall conclusions
There is no evidence of discrimination.
Recommendations • State recommended changes to the proposed policy as a result of the impact assessment • Where it has not been possible to amend the policy, provide the detail of any actions that have been identified • Describe the plans for reviewing the assessment
This guideline is appropriate for use.

h. Document Checklist

To be completed (electronically) and attached to any document which guides practice when submitted to the appropriate committee for approval or ratification.

Title of the document: Guideline for the Management of Fingertip Injuries in Paediatric ED

Policy (document) Author: Dr Erin Dawson

Executive Director: N/A

		Yes/No/ Unsure/NA	Comments
1.	**Title**		
	Is the title clear and unambiguous?	**Yes**	
	Is it clear whether the document is a guideline, policy, protocol or standard?	**Yes**	
2.	**Scope/Purpose**		
	Is the target population clear and unambiguous?	**Yes**	
	Is the purpose of the document clear?	**Yes**	
	Are the intended outcomes described?	**Yes**	
	Are the statements clear and unambiguous?	**Yes**	
3.	**Development Process**		
	Is there evidence of engagement with stakeholders and users?	**Yes**	
	Who was engaged in a review of the document (list committees/ individuals)?	**Yes**	
	Has the policy template been followed (i.e. is the format correct)?	**Yes**	
4.	**Evidence Base**		
	Is the type of evidence to support the document identified explicitly?	**Yes**	

		Yes/No/ Unsure/NA	Comments
	Are local/organisational supporting documents referenced?	**Yes**	
5.	**Approval**		
	Does the document identify which committee/group will approve/ratify it?	**Yes**	
	If appropriate, have the joint human resources/staff side committee (or equivalent) approved the document?	**Yes**	
6.	**Dissemination and Implementation**		
	Is there an outline/plan to identify how this will be done?	**Yes**	
	Does the plan include the necessary training/support to ensure compliance?	**Yes**	
7.	**Process for Monitoring Compliance**		
	Are there measurable standards or KPIs to support monitoring compliance of the document?	**Yes**	
8.	**Review Date**		
	Is the review date identified and is this acceptable?	**Yes**	**2025**
9.	**Overall Responsibility for the Document**		
	Is it clear who will be responsible for coordinating the dissemination, implementation and review of the documentation?	**Yes**	
10.	**Equality Impact Assessment (EIA)**		
	Has a suitable EIA been completed?	Yes	

Committee Approval (Paediatric Guidelines Group)			
If the committee is happy to approve this document, please complete the section below, date it and return it to the Policy (document) Owner			
Name of Chair	**Dr Claire Mitchell**	**Date**	**02/02/2022**
Ratification by Management Executive (if appropriate)			
If the Management Executive is happy to ratify this document, please complete the date of ratification below and advise the Policy (document) Owner			
Date: n/a			