ASHT
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Implementing the Evidence in Practice

CONSERVATIVE WOUND CARE TREATMENT OF FINGERTIP AMPUTATION INJURIES WITH AND WITHOUT BONE EXPOSURE

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Introduction

- Fingertip amputation is a common hand injury, frequently treated surgically.
- Different operative approaches have been applied to provide best coverage, contour and function, and prevent infection and tissue necrosis.
- Non operative treatment especially when there is bone exposed is generally not advised.

Purpose of the study

- To demonstrate that fingertip amputations with or without bone exposure can be successfully treated with a conservative nonsurgical approach.

Methodology

- Inclusion criteria: Individuals who sustained fingertip amputations
- 33 patients total: 28 males, 5 females
- Patients analyzed based on age, handedness, mechanism of injury, wound size, wound geometry, associated fractures, nail bed damage, infection rate, healing rate, range of motion, therapy visits, and return to work status.
- Patients further divided into two subcategories:
  - Amputation without bone exposure
  - Amputation with bone exposure
- All patients treated conservatively using whirlpool, Clorazene, Xeroform, sterile dressing, and local sharp debridement
- Level of evidence: level 4

Injuries

- Most common mechanisms of injury for fingertip amputations:
  - crush injuries (48%)
  - laceration at work (15%)
  - table saw use at home (15%)
  - lawnmower use at home (6%)
  - cooking (6%)
  - dog bites (6%)

Results

	Number of Patients	Wound Size (L x W in cm)	Average Healing Time	Nail Bed Damage	Tuft Fractures	TAM Digits	TAM Thumb	Average Therapy Visits	Average Return to Work
Without Bone Exposure	20	0.5 x 0.5 / 3 x 2 cm	5 days / 22 days	50%	45%	78%	74%	6 visits	37 days
With Bone Exposure	13	0.5 x 0.3 / 3 x 2 cm	23 days/ 26 days	92%	54%	84%	87%	9 visits	56 days

Without bone exposure

**Age of patients ranged from 22 to 75 years old.*

**Average return to work (RTW) based on number of days after initial date of injury.*

** TAM = total active motion*

With bone exposure

**Age of patients ranged from 2 to 73 years old.*

**Average return to work (RTW) based on number of days after initial date of injury.*

**TAM = total active motion*

- No infection
- Full tissue coverage and nail growth.
- One patient underwent surgery to remove a free island of nail growing.

Case #1

2 DAYS AFTER INJURY

17 DAYS AFTER INJURY

29 DAYS AFTER INJURY

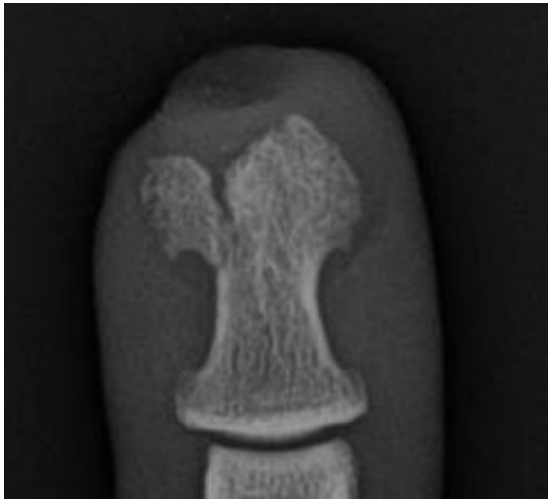
Case #2

7 DAYS AFTER INJURY

12 DAYS AFTER INJURY

26 DAYS AFTER INJURY

Case #3



2 DAYS AFTER INJURY

7 DAYS AFTER INJURY

14 DAYS AFTER INJURY

19 AFTER INJURY

25 DAYS AFTER INJURY

Conclusion

- Conservative non-surgical treatment of fingertip amputations with or without bone exposure is a valid treatment option.
- The results indicated that this conservative approach leads to excellent coverage and contour without infection.
- Limited therapy visits and good functional range of motion.
- Reasonable healing and return to work time.
- Further studies might like to compare results between surgical and non-surgical cases.

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