

Hand Versus Noodle Maker

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to view radiographs and clinical pictures.

Introduction

The patient is a 38 year old right-hand dominant woman who works at a restaurant as a cook. Her right hand was caught in a noodle maker on the night of the injury. She was otherwise well, had no significant past medical problems or allergies, and her Tetanus status was up-to-date.

Physical examination revealed an isolated injury to the right upper extremity. There was a small open wound on the dorsoulnar aspect of the right hand with no soft tissue loss and viable tissues around the open injury. Radiographs are shown below:

There was a spiral fracture of the long finger metacarpal, a comminuted fracture of the ring finger metacarpal with marked bone loss, and a comminuted fracture of the small finger metacarpal, all on the right side.

What would your next step be?

The patient's Tetanus status was up-to-date so no tetanus toxoid was administered. The patient received 1g of Ancef IV and went to the operating room for irrigation and debridement of the open injury.

Intraoperatively, tendons and nerves were intact. Bone loss from the ring finger metacarpal was approximately 2cm and there were multiple comminuted fragments at the small finger metacarpal.

What would be your choice for definitive management?

Management

The decision was made to acutely bone graft both areas of bone loss using tricortical Iliac Crest Bone Graft

Should this have been treated acutely with bone graft or should this have been delayed after infection had been ruled out?

Is the fixation of the long finger metacarpal adequate (without a plate and screws)?

Should a plate have been used on the small finger metacarpal or is interosseous wiring adequate?