

Back to Fine Work with Fine Surgery

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Generation Z of this millennial period has a very active lifestyle. Generation Z is demographic cohort with date of birth between mid-1990s to late 2010. In recent times men and women are very active and they balance their work and recreation. They have focus in their occupation and same way they have passion towards biking, diving and sports. We present a case of software engineer who has sustained an injury while pursuing his passion of bike driving on a weekend holiday. He sustained a crush injury to fingers of dominant right-hand index and middle finger. We had a comprehensive preoperative and postoperative plan and executed the plan well so that he could go back to his occupation of software engineer where he has to use his fingers over keyboard and mouse so that he can earn his livelihood. Treating an injury has to include patient's occupation, his passion, his needs and demands. Crux of any management must include patient demands rather than surgeon's passion of doing a fancy procedure.

Key Words: Crush injury of fingers, Fine injuries and fine surgeries, Lifestyle of patient to be given importance, Minimally invasive flap surgery

Orthopaedic surgeons face many varieties of patients in day to day practice pertaining to lifestyle of people. Those cases vary from ankle sprain sustained during getting down stairs to total traumatic amputation sustained during a crush injury or road traffic accident.

Crush injuries are sustained during variety of situations like a manual labour crushing concrete stones to a house wife crushing nuts in home-made crusher. Crush injury can happen during driving bike, fall of heavy object over body parts, severe high velocity road traffic accident.

As practitioners we have to balance treatment protocols

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based on patient needs and demands.

People have different aspirations and different lifestyle activities pertaining to their individual Preferences [1].

A young 23 years old male who is a software employee in a multi-national company presented to us with traumatic amputation of middle and index finger of right dominant hand while he was on a road trip during his weekend holiday. The bikers club has planned for a 450 km weekend trip (Fig. 1, 2). Our patient had a breakdown of his bike during the road trip. In process of repairing his bike he accidentally sustained crush injury to dominant right-hand index and middle finger.

Crush injury to right hand middle and index finger with bleeding wound. Loss of nail over dorsum of fingers and loss of pulp of tip of fingers on volar aspect can be noted from clinical pictures. Thorough cleansing of hand in fresh saline. sterile dressing was done to protect wound from contamination and to control bleeding. empirical antibiotics were started to prevent infections. One-gram positive ad

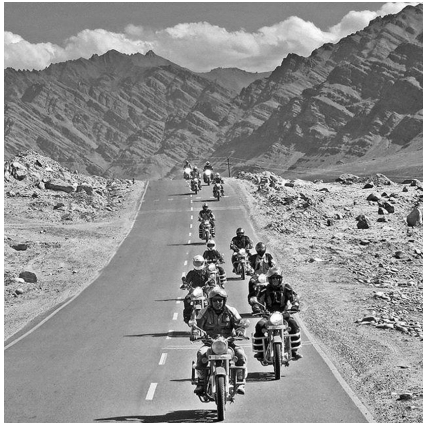


Fig. 1. Bikers club activities.



Fig. 3. Injury pattern volar side.



Fig. 2. Common bike Royal Enfield.



Fig. 4. Injury pattern dorsal side.

gram negative antibiotic were initiated.

Findings after proper evaluation of injury

Index finger (Fig. 3, 4)

1. Loss of pulp over volar aspect of 0.5×0.5 cm
2. Loss of most of nail and nail bed only a small nail bed was left (Allen type 2) [2,3]
3. Radiographs revealed no bony injury.

Middle finger (Fig. 3, 4)

1. Loss of pulp over volar aspect of 0.5×0.5 cm
2. Loss of most of nail bed and nail. (Allen type 2) [2,3]
3. Radiographs revealed no bony injury

Patient has no comorbidities or prior health issues.

Management of injury

What did patient want from us?

1. Good looking finger
2. Able to do his software professional work since it's his dominant hand
3. Go back to work as early as possible.
4. Procedure which is minimally invasive

Options of management given to patient [2-4]

1. Debridement
2. Cross finger flap for middle finger
3. Stump closure for index finger

We had an option of abdominal flap to the same patient but since patient has opted for a minimally invasive procedure, we proceeded with cross finger flap [5,6].

Risks associated

1. Hyperesthesias due to flap [7].
2. Skin colour changes due to flap
3. Nail may or may not survive since very small portion



Fig. 5. After surgery from dorsal side.



Fig. 6. After surgery from volar side.

of nail bed is left intact.

After preoperative counselling and consent

What did we do?

1. Cross finger flap for middle finger from ring finger (Fig. 5, 6)
2. Stump closure of index finger (Fig. 5, 6)
3. We were able to save part of nail bed

Plan of care after surgery

6 weeks plaster of paris slab to protect surgical site and prevent movement at flap site.

5 days postoperative antibiotics to prevent infections as it is a crush injury.

Flap division after 3 weeks

Rehabilitation will start after flap division.

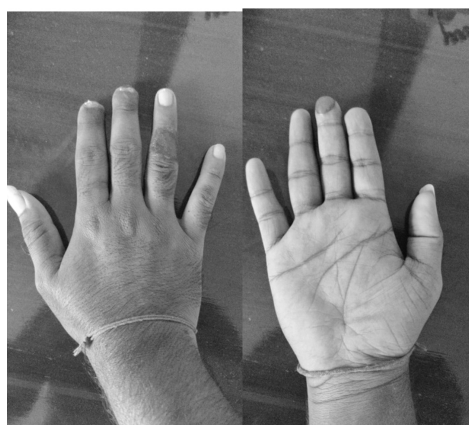


Fig. 7. Six weeks postop. picture healed wound.

Outcome (Fig. 7)

1. Cosmetically Acceptable to Patient
2. Full Range of Movement to Continue His Occupation as Software Engineer.
3. Paraesthesia Were Present for A Couple of Weeks but Later Subsided.
4. He is able to continue his passion for driving both car and bike.

Clinical message and conclusion

Every surgeon has to bear in mind patients lifestyle, his occupation and his activities of passion. It should be surgeon's utmost priority to make patient perform all his activities at end of any procedure. Upper limb injuries are most common injuries in motorcycle accidents or incidents [8]. We would have opted for more extensive procedure and nail management but settled with patient demands of as minimally invasive procedure as possible and less time of recovery so that he can attend his occupation.

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