

Nail Injury

Summary

Injuries to the nail are usually caused by a crush or cut. After a crush an x-ray should be done to exclude a fracture. Nail bed injuries are repaired to prevent future nail plate deformity. This is not just a cosmetic concern as function can be affected if the nail gets caught on clothing or during activities.

Treatment

Nail growth is from the specialised skin beneath the nail plate, the nail bed. The **proximal part, the germinal matrix, provides 90% of the nails growth**. The distal part, the sterile matrix, provides the other 10% but is very important for the adherence of the nail plate.

Injuries to the nail can be secondary to a crush or cut. Injuries, unless minor, are usually assessed in the emergency department. **An x-ray should be done to exclude bony injury**. If there is any question of an open joint, tendon, ligament or nerve injury they are explored in the operating room.

For isolated nail bed injuries the concern is future nail plate deformity. Lacerations can be repaired if the edges are not nicely opposed. Crush injuries often cause a haematoma (blood clot) under the nail. If it is >50% a stellate laceration in the nail bed is likely. The haematoma can become painful and infected so it is often best to wash it out and repair the underlying nail bed injury. This reduces the chance of nail bed scarring which can lead to nail deformities, including splitting and lifting. This is not only a cosmetic concern but **function can be affected if the nail gets caught on clothing or during activities**.

