

HAND INJURY SURGERY

Patient Risk Education

INTRODUCTION

Hand injuries may be severe enough to damage vital structures within the forearm, hand, and fingers such as blood vessels, nerves, bone, tendons, nail and nailed as well as the overlying soft tissues. All of these structures are important to normal hand function. Damage to these structures may be only discovered at the time of surgery.

Damage to blood vessels may require sewing vessels back together with the aid of a microscope and vessel grafts. Damage to bones may require casting, pins, plates and/or screws, bone grafts or other means. Damage to nerves may require sewing them back together with the aid of a microscope and nerve grafts. Damage to the flexor or extensor tendons may require sewing them back together or using tendon grafts at the time of surgery or at a later date. Damage to nails and nail beds may require sewing or pinning parts back together. Loss of soft tissues may require the use of skin grafts or borrowing tissue from other sites (known as flaps) to cover vital structures. Structures beyond repair (fingers, thumbs, nails...etc.) may require trimming, removing or amputating.

ALTERNATIVE TREATMENTS

Alternative treatment consists of non-surgical procedures. There is the possibility of loss of function if injured structures are not repaired. Risks and potential complications are associated with alternative forms of treatment.

RISKS of SURGERY

Every surgical procedure involves a certain amount of risk and it is important that you understand the risks involved with surgery. An individual's choice to undergo a surgical procedure is based on the comparison of the risk to potential benefit. Although the majority of patients do not experience the following complications, you should discuss each of them with your surgeon to make sure you understand all possible consequences of surgery.

Bleeding- It is possible, though unusual, to experience a bleeding episode during or after surgery. Should post-operative bleeding occur, it may require emergency treatment to drain accumulated blood (hematoma).

Infection- Infections after surgery may occur. Additional treatment may be required. Should an infection occur, treatment including antibiotics or additional surgery may be necessary.

Skin scarring- In rare cases, excessive or abnormal scars may result. Scars may be unattractive and of different color than surrounding skin. Additional treatments including surgery may be necessary to treat abnormal scarring.

Loss of vital structures- Amputation of vital structures such as a thumb, finger, fingernail or the hand may be necessary at the time of surgery or subsequent surgeries

Pain- Very infrequently, chronic pain may occur from nerves becoming trapped in scar tissue or from other causes after surgery.

Change in skin sensation- Diminished (or loss) of skin sensation in the finger, hand or forearm may occur and not totally resolve after surgery due to nerve damage.

Inability to restore function Not all damaged structures can be surgically repaired. Some hand injuries may be so severe that there is no reasonable expectation of return of function. Complications involving other parts of the hand and forearm may occur after hand injury.

Risks of Hand Injury Surgery, continued

Damage to associated structures- Structures such as nerves, blood vessels, bone, and soft tissues may be damaged during surgery.

Delayed healing- Depending on the type of surgery performed, complete healing may be prolonged.

Additional incisions necessary- It is often necessary to extend the original wound where the injuries are present or make new incisions to repair the injured structures.

Tendon scarring- Injuries to tendons also affect other structures necessary for proper tendon function. Scarring can occur within the tendon repair itself or in nearby structures to prevent the return of normal tendon function. Additional surgery may not be successful in freeing the tendon from scar tissue which prevents motion. When tendon scarring occurs, other structures such as joints may lose normal motion.

Failure of tendon repair- Sutures are used to hold the tendon repair together until it has healed and has enough strength for function. It is possible to break the sutures or tear apart the tendon repair. Breakage of tendon repairs is a serious problem. If this occurs, additional surgery would be necessary to secondarily repair the tendon. It is important that you follow all post-operative instructions concerning protecting the tendon repair from damage.

Patient failure to follow through- Tendon structures after surgery are vulnerable to breakage until healing has occurred. It is important that the tendon is not subjected to excessive force or motion during the time of healing. Personal and vocational activity must be restricted. Protective dressings and splints should not be removed unless instructed by the surgeon or hand therapist. Successful restoration of tendon function depends on both surgery and subsequent hand rehabilitation. It is important that you participate in follow-up care and hand rehabilitation after surgery.

Bone healing problems- Fractured bones may heal with a malunion (altered orientation of the bones), nonunion (lack of healing of fractured bones), osteomyelitis (bone infection), or damage to growth plates in children and adolescents.

Loss of blood supply- Repaired blood vessels can clot or become blocked requiring re-operative surgery or loss of the affected part.

Nail deformities- Permanent deformities of the nail can occur with nail injuries in spite of their repair.

Skin contour irregularities- Contour irregularities and depressions may occur after surgery. Visible and palpable wrinkling of skin may occur.

Surgical anesthesia- Both local and general anesthesia involve risk. There is the possibility of complications, injury, and even death from all forms of surgical anesthesia or sedation.

Unsatisfactory result- There is the possibility of a poor result from the tendon repair surgery. This would include risks such as skin and soft tissue loss, wound disruption, chronic pain and loss of hand

function. **There is the possibility that hand function after tendon repair surgery may not be adequate for return to your regular occupation.**

Allergic reactions- In rare cases, local allergies to tape, suture material, or topical preparations have been reported. Systemic reactions which are more serious may result from drugs used during surgery and prescription medicines. Allergic reactions may require additional treatment.

Need for additional surgeries- Additional surgeries may be necessary during the present hospitalization or in the future to repair or reconstruct injured structures.

Patient Signature _____

Date_____

Physician Signature _____

Date_____