NEEDLE APONEUROTOMY (NA)

Patient Information

Needle aponeurotomy (NA) (percutaneous fasciotomy) is a less invasive treatment for Dupuytren's contracture. A needle is used to cut the "cord". The cut ends of the cord can then separate which helps to improve the straightening (extension) of the finger. **Complications may occur including tendon injury, ligament injury, nerve injury. Skin injuries including tearing (due to stretching the skin at the contracture) may occur and can usually be treated with local wound care.**

Before the procedure:

Food? Unlike traditional surgery, it is safe to eat before the procedure.

- **Medication?**
    - **Antianxiety medicine-** If you are concerned about being anxious, or have had to take antianxiety medicine in the past for dental procedures, it's reasonable to take antianxiety medicine such as Valium or Xanax before this procedure. However, we would like you to wait to take the medication until your consent is signed. You can bring them with you and take them after the consent is signed but it will take approximately one hour before it works.
    - **Prophylactic antibiotics**- If your regular doctor has recommended that you take prophylactic antibiotics before surgery because of joint replacement, heart disease or other medical problems, it is appropriate to take that type of medicine before this procedure.
    - **Anticoagulation**- If you take aspirin, blood thinners such as coumadin, or have any questions about your medications, please discuss it with us.
- **Driving?** Usually only one hand has the procedure. Therefore usually you can drive yourself home. Optimally if someone else could be with you that would be helpful. You should have someone with you if you are taking any pain medication or antianxiety medication.
- **Skin Issues?** If you have recent injuries, wounds, insect bites or healing areas involving the palm of the hand or the fingers, it might not be safe to proceed with NA because of the risk of possible infection.

Please check us if you have other questions.

The Procedure:

The procedure is performed while you are seated or lying down with your arm stretched out. The doctor will use a marking pen to make dot marks on the skin where he plans to use the needle. He will then numb up the skin at these sites with a tiny needle and local anesthetic. The doctor will then work with a needle in the areas that were numbed to cut the cords under the skin. At the end of the procedure, the doctor may give anesthetic and cortisone shots into these areas to prevent pain and swelling.

What will I need to do?

- Relax, listen to music, and talk as much as you like. The actual procedure is only intermittently uncomfortable. You should tell the doctor if you feel anything painful, and in particular if you feel any tingling or numbness in your fingertips – that will help minimize the chance of nerve irritation/injury after the procedure.

Is it very painful?

- Usually not. The little shots into the skin of the palm sting for a few seconds, and they act instantly. The cords themselves have no feeling, and don't hurt when they are cut. Joints which have been very bent may be painful to stretch out, and sometimes it helps to give a small anesthetic shot into a joint before straightening it.

- **What will my hand be like at the end of the procedure?**
    - If all goes well, your fingers should be straighter. The needle entry sites will be covered with bandaids. Occasionally a larger dressing is applied. You may have some numbness in your fingers from the last set of shots at the end of the procedure -and this may last into the next day. Occasionally the skin does tear because of the contracture and is treated with local wound care.

After the procedure:

Day of procedure:

- **Band-Aids** can usually be removed and left off later on the same day. (unless there is a skin tear) We will give you more specific instructions.
- **Use:** You should be able to use your hand for light activities (eating, getting dressed, going to the bathroom) and get your hand wet in the shower on the day of the procedure.

First 48 hours:

- **Ice and elevation** are the keys to a painless recovery. On the day of and the day after the procedure keep your hand pointing up as much as you can, and hold something cold in your hand every hour for 10 minutes at a time.
- Avoid swimming or submerging your hand in the bath for the first 2 days.

Washing: You should try to keep your hands dry for a few hours after the procedure. If you get the Band-Aids wet, take them off and leave them off.

- **The First Week**: You should avoid strenuous activities with the hands for one week after the procedure. During this time, avoid activities which would make your hands sweaty, dirty, or exposed to harsh chemicals. This is very important to prevent infection.

Splinting your hand with a brace, worn at night, may be helpful if you have several fingers involved, contractures of the PIP joints, severe contractures, or tendon imbalance.
Medications: Usually, there is no need for prescription pain medicine after the procedure. Tylenol or NSAI medication, if you usually can take it, is appropriate.

Follow up:
The week following your procedure, call us to report your progress
Three months after the procedure, have a follow-up, call us, send or email photographs of your hands to us so that we can follow your progress.

Results NA

- Needle aponeurotomy (NA) is not a cure for Dupuytren's.
- On average
    - NA has a shorter recovery and lower complication rate than an open surgery.
    - Nerve and tendon injuries can occur.
    - Recurrence occurs sooner than after open surgery and open surgery may still be needed. Treatment for associated problems that can contribute to a "bent finger" from tendon problems such as boutonniere deformities, trigger digits or sagittal band rupture as could be needed.

Percutaneous Fasciotomy for Dupuytren's Contracture. Eaton, C, MD *J Hand Surg 2011;36A:910–915.*
Foucher G, Medina J, Navarro R. Percutaneous needle aponeurotomy: complications and results. J Hand Surg 2003;28B:427– 431.