Dr. Bernard Lallemand
HAND AND UPPER LIMB SURGEON

Dupuytren's Disease

www.drlallemand.com

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Condition 01

Definition

Dupuytren's disease is a condition characterized by progressive fibrosis of the palmar fascia of the hand. It causes thickening and contraction of the tissue in the palm, leading to permanent flexion of the fingers, often the ring and little fingers. This contracture gradually limits hand mobility.

Causes

The exact cause of Dupuytren's disease is unknown, but it is believed to result from a combination of genetic, environmental, and cellular factors. It has a strong hereditary component, often linked to Northern European ancestry. Cellular dysfunction, including fibroblast overactivity, leads to collagen deposition and fibrosis. Environmental triggers like smoking, alcohol use, or repetitive hand trauma may contribute to its onset or progression.

Signs and Symptoms

The signs and symptoms of Dupuytren's disease include:

Nodules in the palm: Small, firm lumps under the skin, often painless at first.

Thickened bands: Development of cord-like structures in the palm or fingers.

Finger contractures: Inability to fully straighten the affected fingers, most commonly the ring and little fingers.

Progressive stiffness: Gradual loss of hand function due to limited finger extension.

Skin changes: Dimpling or puckering of the skin over the affected areas.

These symptoms typically progress over time and vary in severity.

Diagnosis

The diagnosis of Dupuytren's disease is primarily clinical, based on physical examination. Key findings include palpable nodules or thickened cords in the palm and flexion contractures of the fingers. The tabletop test, where the patient struggles to lay their hand flat on a surface, is often used to assess severity. Imaging studies like ultrasound or MRI are rarely needed but can confirm deeper tissue involvement if necessary.

Treatment

Treatment for Dupuytren's disease depends on severity and functional impairment. Mild cases may only require observation, while advanced contractures are treated with options like needle aponeurotomy, collagenase injections, or surgical fasciectomy to release the cords. Post-treatment hand therapy is essential to restore function and prevent recurrence. Recurrence is common, requiring ongoing monitoring and potentially repeat interventions.

Dr. Bernard Lallemand will guide you through the best treatment options tailored to your specific case.

Dupuytren's Disease

Surgery 02

Indications

Surgery for Dupuytren's disease is indicated when finger contractures significantly impair hand function, typically with flexion ≥30° at the MCP joint or any limitation at the PIP joint. Rapid disease progression or painful cords may also warrant intervention. It is considered for cases unresponsive to non-surgical treatments. Early surgery is avoided due to risks of recurrence and complications.

Surgery Procedure

Dupuytren's disease with fasciectomy is a day case procedure, which means you can go home the same day. It is often performed under general or regional anesthesia, so only the area being operated on will be numb.

Once the anesthesia is in place and the area is disinfected, the surgeon will make classical zigzag incision in the palm, usually following natural creases to minimize visible scarring. Through this incision, the surgeon carefully removes the thickened cords and fibrous tissue causing the contracture, ensuring the surrounding nerves and blood vessels are preserved. This procedure is done under direct vision, using magnifying surgical loupes for enhanced precision.

After releasing the contracture, the surgeon may extend the incision into the fingers if needed for complete correction.

A complementary anaesthetic will be given at the end of the procedure with Ropivacaine to keep the operated area numb for 12 to 24 hours, allowing better management of post-operative pain.

A dressing and a padded bandage will be applied upon leaving the operating room

After the Surgery

You don't need to immobilize your fingers, and you will be able to move them quickly to prevent the tendons from sticking together or to the skin. This helps in better recovery and prevention of adhesions.

Risks 03

What Are the Main Risks of This Operation?

Swelling, Stiffness, & Scar Pain

After the operation, you might experience swelling, stiffness, and pain around the scar. Keeping your arm elevated and moving your fingers as soon as possible can help reduce these symptoms. Local swelling around the surgical site can last for several months.

In rare cases, some patients may experience more swelling and stiffness than usual, sometimes due to complex regional pain syndrome (CRPS), which affects less than 1% of cases.

Infection

Infections after this operation are rare (less than 1% of cases).

Local wound infections can usually be treated with oral antibiotics. In rare instances, deeper infections may occur, requiring hospital readmission, intravenous antibiotics, and sometimes additional surgery.

Wound Healing Problems

Wound healing problems are more common with complex procedures, affecting 2-3% of patients, and may require extended dressings or antibiotics. Rarely, further surgery is needed, which can delay functional recovery.

Nerve Injury

Small nerves run along each side of the fingers and are often intertwined with the fibrous tissue of Dupuytren's disease, requiring careful dissection during surgery. This can lead to temporary or permanent loss of sensation in parts of the finger, depending on the complexity of the surgery.

Blood Vessel Injury

Two arteries supply blood to each finger, and damage to both can lead to coldness, discoloration, or even loss of the finger if blood flow is insufficient. This complication is rare in Dupuytren's surgery, except in highly complex cases.

Incomplete Correction of the Deformity

The degree of correction depends on the affected joint and the severity of the deformity. Metacarpophalangeal (knuckle) joints typically respond well, but interphalangeal (finger) joints are harder to fully straighten. Significant improvement is likely, but a completely normal range of motion may not be achievable in severe cases.

Recurrence of the Disease

The percentage of patients with a recurrence increases progressively over the months and years following the operation.

Tendon Rupture

Tendon rupture is a very rare complication.

By understanding these potential risks, you can be better prepared for the recovery process. Always follow Dr Bernard Lallemand's advice and report any unusual symptoms immediately.

Dupuytren's Disease

Preoperative course 04

Medical Check-Up and Tests

Health History: Share your medical conditions, allergies and past surgeries.

Medications: Inform your doctor about all medications, especially blood thinners.

Tests: Ensure to bring all tests, such as X-rays, MRI or CT scans.

Understanding your Surgery

- Know the Purpose of the surgery and what it aims to achieve.
- Ask your doctor about the steps, risks, benefits, and alternatives.
- Give your informed Consent after understanding the procedure.

Pre-Anesthesia Consultation (PAC)

You will meet with the anesthetist to discuss your health and the anesthesia options.

If you have any existing health issues, additional checks may be required to ensure everything is safe for the anesthesia.

Emotional and Practical Preparation

- Arrange for someone to assist you after surgery.
- If you're anxious, discuss support options with your doctor.
- Also, stop smoking and limit alcohol intake before surgery to support healing.

2 Days before Surgery

Wash the Surgery Site area twice a day with regular soap (unless you have a cast) and follow any additional instructions from your doctor for cleaning the area.

Night before Surgery

You should not eat nor drink anything after midnight or generally 6 to 8 hours before surgery unless your doctor advises otherwise.

Take a bath or shower, wash your hair, and ensure your nails are clean and free of polish.

Day of the Surgery

Be sure to arrive 3 hours in advance for your surgery, and bring your ID (Emirates ID or passport) and insurance card

- Wear loose clothing that can easily fit over dressings or a cast
- No Makeup or Jewelry: Remove all jewelry, piercings, and skip eye makeup for the day.
- Take Your Medications: Follow your doctor's instructions for taking your medications.
- Bring Essentials: If you wear glasses, contact lenses, or hearing aids, make sure to bring them along.

Postoperative course 05

Day of the Surgery

- After the operation, a dressing and padded bandage will be applied.
- Keep these dressings clean and dry.
- To reduce swelling, keep your arm elevated in a sling or on pillows.
- Start moving all the unaffected joints immediately after the operation to prevent stiffness
- Take painkillers before the anesthetic wears off and continue as necessary.

Day 2 - 14

The padded bandage will be changed in consultation by a nurse and will be replaced by a sticking plaster over the wound to protect it. Ensure the wound stays clean and dry.

This bandage will be changed regularly according to Dr Bernard Lallemand's advice.

A removable splint will be provided if needed.

Continue gently exercising your hand and wrist. You can use your hand for light activities, but avoid heavy lifting and prolonged periods with your hand hanging down below your waist.

2 - 6 Weeks

A wound check and removal of the stitches should occur between 10 and 14 days after your surgery. The details will be arranged on the day of your first visit.

Gradually increase activities with your hand and wrist as comfort allows.

Once the wound is completely healed, a daily session of 10 minutes massaging the scar with moisturized hand cream is often useful to reduce swelling of the scar.

After 6 Weeks

Most people return to normal activities by this stage, although scar massage may still be beneficial.

Driving

You may drive when you feel confident to control the car, even in an emergency.

Time Off Work

The amount of time needed off work will vary depending on the nature of your job. For light office Job, you may only need a few days off work. For heavier Job, you may need a longer period off work. Discuss your individual case with your surgeon.

Post Operative Difficulties

Contact Dr Bernard Lallemand's service if your fingers are more swollen, stiffer or painful than expected, and if you see any discharge, wetness, or detect any unpleasant odours under your dressing.

Outside normal working hours, you may need to attend Emergency Department for help with these issues.

Postoperative physiotherapy 06

Immediate Postoperative Period (Day 0–Week 2)

- Dressings: Keep wound clean and dry; change dressings as instructed by the surgeon
- Pain Management: Use prescribed analgesics and elevate the hand to reduce swelling.
- A removable splint will be provided.
- Mobility Exercises: Begin gentle active range of motion (AROM) exercises of the fingers.

Early Rehabilitation (Week 2–Week 6)

Wound Care: Stitches removed (if nonabsorbable); monitor for signs of infection.

Initial Evaluation: A physiotherapist will perform an initial assessment to check the hand and wrist.

Therapy Focus:

- Gentle active and passive range of motion (AROM/PROM) of the fingers.
- Scar management techniques (e.g., massage, silicone gel sheets).
- Edema control through compression or elevation.
- Gradually introduce light functional tasks to improve hand use.
- Dynamic splinting for resistant contractures (if advised by the therapist).

Strengthening and Functional Recovery (Week 6–Week 12)

Therapy Focus:

- Progressive strengthening exercises, including grip and pinch training.
- Advanced scar desensitization if tenderness persists

Functional Goals: Encourage participation in daily activities requiring hand dexterity.

Long-Term Maintenance (Week 12 and Beyond)

Home Program: Continue with daily exercises for strength and flexibility.

Follow-Up: Regular check-up with the surgeon and therapist to monitor recovery and address recurrence.

Lifestyle Modifications: Avoid repetitive hand trauma or stress that may contribute to recurrence.

Most patients transition through therapy without complications and typically require 6 - 10 therapy visits. Always follow your physiotherapist's instructions for the best recovery