LEONARDO
ÄRZTE FÜR ORTHOPÄDIE UND TRAUMATOLOGIE

ACHILLES TENDON RUPTURE

DEFINITION/DEVELOPMENT

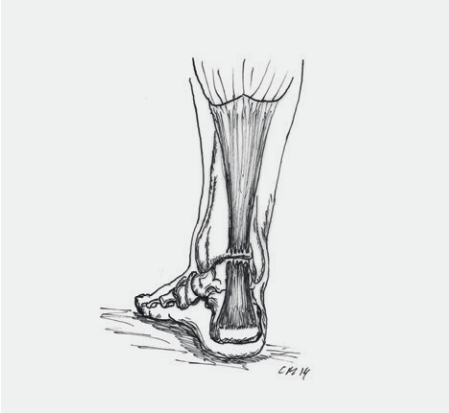

Fig.1 Achilles Tendon Tear

The rupture of the Achilles tendon is usually the result of an acute injury and is one of the most frequent sports injuries. However, it is quite possible that preexisting degenerative changes reduced the resilience of the tendon, e.g. in diabetics or after cortisone injections into the tendon. Patients report a whip-like sound, which is sometimes even heard by accompanying persons. Often, patients are convinced to have been kicked by someone.

Typically, the tear is located 2-6 cm above the heel (Fig. 1). Because of the poor circulation in this area, the tendon is particularly susceptible to an injury.

SYMPTOMS

In the area of the tear, bruising and swelling quickly develop. A dent can occasionally be felt. After the tear, the foot can usually only be moved downwards or only with severe pain at the heel and/or in the calf. Walking is usually difficult, or with a clear limp.

EXAMINATION

The diagnosis can usually be identified by questioning and a clinical examination. Further diagnostics can be useful in unclear cases. An MRI (see Fig. 2) or an ultrasound examination show the extent and the exact location of the injury.

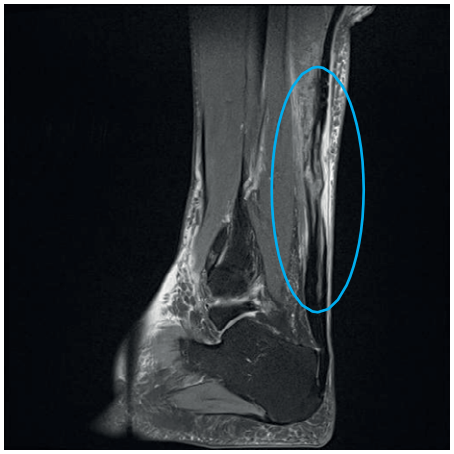

Fig 2: MRI of a Previously Damaged Tendon with an Untypical Tear High Above.

TREATMENT

A) Non Surgical

Not all ruptured Achilles tendons need to be operated on. In certain situations, when the ends are nicely together and the initial tension was good, the tendons can heal while immobilized in a VACOped (Fig. 4.) or a cast with a wedge. In particular, if the risk of surgery is increased for other reasons, it may make sense to choose this treatment. This eliminates the complications that can arise during an operation. However, the risk of a new tear is greater than with surgical treatment, so generally we recommend surgical treatment.

B) Surgical

To restore the correct length and the function of the tendon, we prefer surgical reconstruction. The torn tendons are stitched together using a special suturing technique (Fig. 3 left). If the tear emerged due to extensive degeneration, depending on the situation, the tendon defect must be bridged with a tendon extension above the tear or even with a so-called tendon transfer (reinforcement with an additional tendon, Fig. 3 right). Various surgical techniques are used here. The follow-up treatment must therefore be individually tailored. However, immobilization in a VACOped (Fig. 4) for several weeks is necessary in all cases.

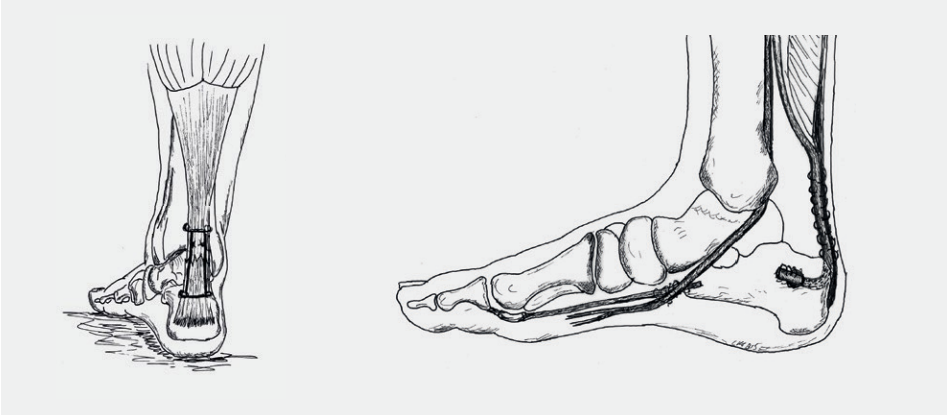

Fig. 3: Suture of the Tendon (left) and Tendon Transfer (right)

RISKS AND COMPLICATIONS

Complications and risks can occur during or after the operation, delaying the healing process or requiring another operation. They can never be completely ruled out during operations, even if they are rare for foot operations. In summary, these are:

- Healing disorders
- Infections
- Vascular injuries, post-operative bleeding, hematoma, blood loss
- Nerve injury
- Thrombosis, embolism
- Residual symptoms

FOLLOW-UP TREATMENT

The surgery is only a part of the whole treatment. Follow-up treatment contributes significantly to success. It is important that you know what you should consider and possibly avoid. The functional aftercare begins the day after the operation. The patient will be mobilized again with a special boot (VACOped, Fig. 4). Most of the time, starting from a pointed foot position, the foot position is returned to a normal position over 6 weeks (3 weeks 30° pointed foot, then 3 weeks 15° pointed foot). You may only put partial weight bearing on the foot during these first 6 weeks. After 6 weeks, weight bearing can be increased again and the VACOped can be slowly omitted.

Fig. 4: VACOped with Changing the Position from Pointed Foot to Normal Position

Dressing and Wound Care

During the time in the hospital you will be shown how to care for the wound. As long as the wound is not completely dry (wound secretion/blood), the dressing should be changed every day. Do not apply any ointments or powder directly to the surface of the wound until the stitches have been removed! Disinfection is not necessary. Always remove the entire bandage when changing. The new bandage must be dry and must not slip.

Once the wound is dry, a normal plaster (quick bandage) is sufficient. An elastic bandage can protect and cushion the operated area. This will also reduce the swelling that is still present. If you are not sure whether everything is normal, you can contact your family doctor or contact us directly.

The stitches can be removed about 2 weeks after the operation, this is usually done by the family doctor.

Swelling and Pain

After an operation, the affected leg is always more or less swollen. This swelling can recur for weeks (up to 6 months). The most effective measure to prevent this is to elevate the leg. It also makes sense to move several times a day (walking, not as much standing) but only for a short time. It is time to elevate the leg again if the foot/calf is tense and starts to hurt again.

Pain in the operated foot can occur in the first few days and weeks after the operation despite these measures. However, to relieve the pain, you can take the prescribed pain medication.

Pressure

The permitted weight bearing of the foot depends on the operation performed. You received a VACOped to protect and simplify mobility (Fig. 4). Depending on the operation, either partial weight bearing was recommended, or full weight bearing was allowed. In the first 2 weeks and until the wound is healed we generally recommend partial weight bearing.

Partial Weight Bearing

You are allowed to put about 25 kg of weight on the affected foot. This roughly corresponds to the weight of the leg and means that you always have to use crutches. Our physiotherapists will instruct you accordingly in order to be able to implement this correctly. It is important that you can use the stairs with the aid of crutches by yourself.

Full Weight Bearing

As soon as the pain allows it, you may put full weight bearing on the foot. It is important that the special shoe is worn consistently through

the first 6 weeks. The crutches are mainly used for security reasons and can slowly be omitted.

Personal Hygiene

As long as the stitches are still in the wound, i.e. usually in the first 2 weeks, the operated foot should be protected with a plastic bag. The easiest way is to pull the plastic bag over the special shoe. As soon as the stitches are removed, you can shower and bathe without further precautionary measures.

Thrombosis Prophylaxis

Thrombosis prophylaxis begins during the hospital stay. Depending on the operation, this prophylaxis must be continued. In most cases, we use Fragmin 5000IU pre-filled syringes, which are injected by the patient themselves once a day. You will be instructed by our nursing staff during your stay.

How long you need these injections depends on the operation, the individual risks and is necessary until you can fully weight bear your foot and walk without crutches again, in about 8 weeks.

Work Ability

A rest period is crucial after an operation. In the first 2 weeks you should take care of yourself and not work. How long you will be unfit for work depends on the type of surgery as well as your stress profile. In most cases you and your employer should be able to temporarily find less stressful work. This enables early resumption of work.

The signed work absence that you will receive from us is a preliminary assessment. The certificate can be extended if you are not able to resume work after this time. If this is the case, report to your family doctor or to us.

However, you may take up your work again any time before the given date, if you feel capable to do so.

Driving a Car

At what point you can resume driving again depends on the kind of operation you had. You must refrain from driving as long as you cannot fully weight bear your foot or are still requiring crutches. How far thereafter your ability to drive is restored is up to you. In case of doubt or if you are unsure, we recommend to avoid driving

Check-Ups

Your surgeon will require a check-up six weeks after the operation. Then the further procedure will be determined. As a rule, the VACOped can then be slowly dismantled and crutches can slowly be omitted. Continuing physiotherapy is important. Most activities can be resumed about three months after the operation. In the follow-up consultation your physician or your physiotherapist can advise you as of when certain sports can be taken up again.

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