Amputation

Amputation is the removal of a peripheral part of the body which happened as a result of an accident or surgery. The procedure is approached as the last possible option to save a limb or life.

Causes of amputation

Amputation is indicated for various reasons. The most common cause is a blood circulation disorder in the lower limbs. Insufficient blood supply to the limbs puts a pressure to the rest of the body. This can be a life-threatening condition.

Amputation can help relieve pain and change the patient's overall health status.

One of the causes of amputation can be diabetic microangiopathy which affects capillaries.

Types of lower extremity amputation

Foot amputation

This category includes amputation of any part of the foot - it may be toes or portion of the foot.

Below-knee amputation (transtibial amputation)

Lower extreminty amputation of the limb in the lower leg at any level from the ankle to the knee.

Knee disarticulation amputation

Above-knee amputation (transfemoral amputation)

Lower extreminty amputation of the limb in the area of thigh at any level from the knee to the hip joint.

Hip disarticulation amputation

Rehabilitation care after surgery

Stump care begins on the second day after the surgery. Percussion massage can be performed with fingers over the bandages (not when the pain is present). Stump care also includes strengthening the stump with stretching (in the knee or hip joint for example). It is necessary to bandage the stump even through the drains. We must not forget about gluteal muscles rehabilitation. We do this by pulling both gluteal muscles towards each other.

Rehabilitation also includes strenghtening the stump while standing. Under supervision and only after the soft tissues of the stump have healed, you can stand up from a bed or chair with the support of axillary or French crutches. Lean the bandaged stump gradually with greater and greater force on the underlay until painful. Gradually change the underlay to a harder one (e.g. pillow, mattress, polystyrene, wood). While standing perform balance exercises with the load being transferred alternately to both lower limbs. Make sure to keep your balance with the crutches you use.

The stump needs to be massaged. We can perform brushing, massage with a ball or we can use a dry washcloth, sponge and rub the stump with them. Percussion massages are also practiced.

Bandage always must be dry, flexible and clean. The area around the stump must always be well-circulated and warm. We pull the stump with an elastic bandage up to preserved joint so that it is shaped as best as possible into a conical shape for a better fitting of the prosthesis.

Prevention of functional contracture is carried out by positioning the stump to the appropriate position on a firm flat bed without an underlay. The stump also needs to be hardened. This can be achieved by alternating baths in warm and cold water.

After agreement with the doctor you can apply lanolin ointment to the stump (or other suitable ointment).

We monitor whether phantom pain occurs.

In some cases wrong shape of the stump makes fitting the prosthesis impossible.

Main principles of bandaging

We use sufficiently wide elastic bandages (10-14 cm). The first turns of the bandage are never applied circularly around the stump - this could compress the superficial venous system and lead to insufficient drainage of the stump. Inadequate drainage of the stump would occur because the vascular connections are not yet formed. We

bandage up to the preserved joint of the limb.

Femoral amputation

When it comes to femoral amputation, we bandage over the waist. At the back bandage should reach the ischium and on the inner surface of the thigh bandage should reach the crotch. Soft tissue mounds should be not formed during bandaging because they may later prevent the prosthesis from fitting properly.

Tibial amputation

For lower leg amputations we bandage above the knee joint.

We bandage 3 times a day and we always alternate the bandaging with additional stump care. We also bandage overnight. Bandaging at night is not performed in patients with a vascular cause of amputation. We bandage the stump with an elastic bandage, often elastic stocking is used.

PROSTHETICS = a field that deals with the replacement of a shortened limb, including its function.

Links

Related articles

- Limb amputation
- Gangrene

Sources

- VOJTOVÁ, Jitka. *Osetrovatelstvi* [online]. [cit. 2014-03-24]. <http://www.osetrovatelstvi.eu/>.
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