

## **Knee Disarticulation Amputation**

### **Nerves & Vessels:**

#### **Saphenous vein and nerve**

On the medial side, dissect out the saphenous vein to ligate with absorbable suture. Clamp the vein. Locate the saphenous nerve, draw it down, transect it, and allow it to retract. Ligate the saphenous vein with absorbable suture.

#### **Popliteal vessels and tibial nerve**

Dissect in the posterior tissue to expose the popliteal vessels and the tibial nerve.

#### **Tibial nerve**

The tibial nerve is dissected off of the vessels.

#### **Popliteal vessels**

The popliteal vessels are clamped and then trimmed to appropriate length for ligation

Double ligation of the popliteal vessels with first a stick tie of 0 silk suture (non-absorbable). The stick tie could leave a small hole that could bleed, form an arterial-venous fistula or a small pseudo aneurysm, so a second free tie is placed.

The free tie of 0 silk non-absorbable suture proximal to the stick tie to avoid problems with the hole in the vessel.

#### **Common peroneal nerve**

Dissect out the common peroneal nerve. Pull the peroneal nerve distally 5 to 10 cm, transect it sharply, and allow it to retract away from areas of pressure and scar.

#### **Tibial nerve**

Pull the tibial nerve distally 5 to 10 cm and transect it.

#### **Small saphenous vein and sural nerve**

In the subcutaneous tissue of the posterior flap, the small saphenous vein is located and clamped for ligation. The sural nerve is found just lateral to the small saphenous vein. At this level it can be proximal to where the medial and lateral sural nerves join to form the common sural nerve.

#### **Sural nerve**

Pull the sural nerve 10 to 12 cm distal, divide it and allow it to retract well away from the areas of pressure and scar.

#### **The tibial, sural, and common peroneal nerves**

These are three of the 4 nerves of concern in a knee disarticulation. The fourth nerve was the saphenous nerve managed earlier in the procedure.

#### **Small saphenous vein**

Ligation of the small saphenous vein.

#### **Dissect lateral gastroc**

Dissect the lateral gastroc muscle off the fascia so that it can be removed.

Keep the superficial fascia with the posterior flap. Dissect the muscle up proximally.

#### **Vascular pedicle**

Dissect and clamp the vascular pedicle to the lateral gastroc muscle.

#### **Ligate the vascular pedicle**

Ligate the vascular pedicle of the lateral gastroc muscle.

#### **Let tourniquet down**

#### **Hemostasis**

Obtain hemostasis with pressure, and then with electrocautery or small ligation of bleeding points.

**Saphenous vein**

Clamp another branch of the saphenous vein for ligation.

**Saphenous nerve**

The main portion of the 4<sup>th</sup> nerve, the saphenous, is finally found, drawn down and divided to allow it to retract. The earlier small nerve was probably a branch of the saphenous.

**Ligate the saphenous vein**

Ligate with absorbable suture.

**Hemostasis**

Use electrocautery to obtain hemostasis.

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