

OPERATION NO 022
SURGEON.....M.H.EDWARDS
Last updated 18 10 06

TOE AMPUTATION

GRADE 2 (DIFFICULT)

THESE STEPS COVER

AMPUTATION OF BIG TOE
AMPUTATION OF TOES 2-5
MULTIPLE AMPUTATIONS
AMPUTATION OF PHALANGES
AMPUTATION INCLUDING METATARSALS
REDO AMPUTATION

THESE STEPS DO NOT COVER

FOREFOOT AMPUTATION

INDICATIONS

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ATHEROMATOUS ISCHAEMIA

DIABETIC GANGRENE

TRAUMA

OVER-RIDING TOE

AS AN ALTERNATIVE TO A BELOW KNEE
AMPUTATION WITH IMPROVING VASCULARITY OF
THE TOES

eg. Previously healthy tissue after trauma.

Following successful sympathectomy.

Following successful vascular surgery.

From natural improvement.

CLEAR DEMARCATION BETWEEN
VIABLE AND NONVIABLE TISSUE

Demarcation should be no more proximal than
the mid-proximal phalanx.

For more proximal demarcation,:
consider a mid-tarsal,

or even a below knee amputation
for peripheral vascular disease.

CONTRA-INDICATIONS

ABSOLUTE

Progressive ischaemia.

Uncertain demarcation lines.

Soft tissue infection in the forefoot.

Osteomyelitis in the metatarsal.

Septic arthritis in the metatarso-phalangeal
joints.

Iliac arterial block.

RELATIVE

A static degree of ischaemia.

Ischaemia in the forefoot.

Heel ulcer.

SECTIONS

STEP
NUMBER

1 PRELIMINARIES

12	ANAESTHESIA
13	POSITION
14	STANCE
15	SKIN PREPARATIONN
20	TOWELLING UP
26	SKIN INCISION
29	DEEPENING THE INCISION
31	DISSECTING THE BONE
32	CUTTING THE BONE
38	CLOSURE
40	DRESSINGS
45	FINAL TOUCHES
52	EQUIPMENT AND MATERIALS LIST (FRIARAGE HOSPITAL)

**STEP
NUMBER**

- 1 PRELIMINARIES - READ ON**
- 2 CHECK YOU HAVE THE CORRECT
PATIENT**
- 3 CHECK YOU HAVE THE CORRECT
SIDE**

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- 4 CHECK YOU HAVE THE CORRECT LIMB
- 5 CHECK YOU HAVE THE CORRECT DIGIT(S)
- 6 CHECK YOU HAVE CONSENT FOR A MORE EXTENSIVE AMPUTATION IF NEEDED
- 7 CHECK AN APPROPRIATE ANTIBIOTIC IS BEING GIVEN
In the absence of a culture sensitivity, give Amoxycillin 250mg. and Flucloxacillin 250mg. orally or intravenously 6 hourly.
- 8 CHECK THE OTHER LIMB IS PROTECTED
Protect it from pressure or damage during the operation by means of soft padding, particularly under the heel.
- 9 DO NOT USE A TOURNIQUET
- 10 CHECK THERE IS NO OTHER PROCEDURE TO DO
- 11 CHECK THERE IS A DIATHERMY PAD
- 12 ANAESTHESIA - READ ON
General anaesthesia

Epidural and spinal anaesthetics are suitable alternatives.
- 13 POSITION - READ ON
Supine

Have access from groin to toes.

STEP NUMBER

- 14 STANCE - READ ON
Stand on the side of the amputation.

Have your one assistant opposite.
- 15 SKIN PREPARATION - READ ON
- 16 HAVE ALL DRESSINGS REMOVED
- 17 HAVE THE LEG HELD UP AT 45 DEGREES
Have an unscrubbed assistant holding the calf.

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18 CULTURE SWAB THE TOE(S)

19 CLEAN THE SKIN

Clean the skin from the toes to the midcalf.

Use 2 swabs on sticks with 0.5% Chlorhexidine in 70% Propanol and one to dry off.

20 TOWELLING UP - READ ON

21 PLACE A LARGE SHEET ON
THE OPERATING TABLE UP
TO THE KNEE

22 WRAP THE LIMB ABOVE THE
ANKLE IN A DRESSING TOWEL

23 HAVE THE FOOT LOWERED
ONTO THE OPERATING TABLE

24 FASTEN THE DRESSING TOWEL
ROUND THE CALF
Use a towel clip.

25 PLACE AN UPPER SHEET DOWN
TO THE ANKLE

26 SKIN INCISION - READ ON

Use a scalpel with a no. 10 Swann-Morton blade.

Do not use a tourniquet.

STEP
NUMBER

27 INCISE AROUND THE PLANTAR
ASPECT OF THE TOE

28 EXTEND THE SKIN INCISION ONTO
THE DORSUM OF THE FOREFOOT

This makes a tennis racquet shaped incision with a 2cm. "handle" on the dorsum of the forefoot in line with the metatarsal.

For amputation of the big toe, include the skin over the head of the first metatarsal.

This will allow access for removal of the distal part of the metatarsal bone.

For amputation of adjacent toes, make the

"handle" of the racquet in line with the centre of the wound.

Be very conservative in trauma cases.

Be much more radical in peripheral vascular disease.

Beginners nearly always do not incise widely enough in peripheral vascular disease.

29 DEEPENING THE INCISION - READ ON

30 DEEPEN THE INCISION TO THE METATARSAL BONE

31 DISSECTING THE BONE - READ ON

Use dissecting scissors.

Carefully free the distal half of the metatarsal(s) from the skin, subcutaneous fat muscle and tendons.

If you meet pus, take a swab,

Clean out the cavity.

Expect delayed wound healing.

STEP
NUMBER

32 CUTTING THE BONE - READ ON

33 RETRACT THE PROXIMAL SKIN FLAPS

Use a Langenbeck retractor.

34 CUT THE METATARSAL BONE

Use bone cutters.

Cut the bone transversely, half way down its length.

Check you do not damage the soft tissues.

35 TRIM THE BONE ENDS

Use bone nibblers to give a transverse amputation free from sharp edges.

If you encounter necrotic bone, remove this tissue completely .

Necrotic bone is soft, crumbly,

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usually associated with pus, and may be separate from the rest of the metatarsal.

36 CHECK HAEMOSTASIS

Use diathermy.

37 CHECK THE SWAB, NEEDLE, AND INSTRUMENT COUNTS

38 CLOSURE - READ ON

39 CLOSE THE WOUND

Only close the wound if:

The tissues are healthy,

The skin flaps are loose enough to virtually fall together.

There is no infection.

Use interrupted 3/0 Vicryl (Ethicon W9890).

IN ALL OTHER CASES:

Just cover the wound with a Paraffin gauze dressing.

STEP NUMBER

40 DRESSINGS - READ ON

41 COVER THE AMPUTATION SITE

Use 10 dressing gauzes.

42 APPLY A CREPE BANDAGE

Wind a 10cm. crepe bandage over the dressing gauzes, around the toes, foot and ankle.

Use half stretch tension.

Fasten the bandage with 2 pieces of 2.5cm zinc oxide plaster.

43 CHECK THERE IS NO OTHER PROCEDURE TO DO

44 PROTECT THE HEELS

Use sponge pads under the heels.

45 FINAL TOUCHES - READ ON

46 PRESCRIBE ANTI-BIOTICS

According to swab sensitivity,

Or Amoxycillin and Flucloxacillin 250 mgms.

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q.d.s. for 5 days (except for the presence of Penicillin hypersensitivity.)

47 PRESCRIBE CALCIUM HEPARIN

Give 5000 units subcutaneously b.d. until the patient leaves hospital.

48 WRITE LEGIBLE OPERATION DETAILS

49 FILL IN THE SURGICAL AUDIT FORM

50 FILL IN THE MICROBIOLOGY FORM

51 WRITE A LETTER TO THE
GENERAL PRACTITIONER
AND REFERRING PHYSICIAN

STEP
NUMBER

52 EQUIPMENT AND MATERIALS LIST
(FRIARAGE HOSPITAL)

BASIC PACK ORTHO KNEE

INSTRUMENTS

2 SPONGE HOLDERS

CHARNLEYS P.E.

2 NEEDLE HOLDER

SBONE FILE

4 LANES TISSUE FORCEPS

BONE CUTTER

20 CURVED JOLLS FORCEPS

BONE NIBBLER

ASS TOWEL CLIPS

BLAKES RETRACTOR

ASS SCISSORS

1 NONTOTHED DISSECTING FORCEPS

2X NO 4 KNIFE HANDLES

2 LARGE LANGENBECKS

PREPARATION

HIBITANE WET X2, DRY X1, ETHER METH X1

SUTURES NO MATERIAL

TIES

FASCIA

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FAT
SKIN 1X W9890 3/0 VICRYL
DRAIN OTHER

BLADES
2X 22

DIATHERMY
MONOPOLAR, FLEX, HOLDER, MEDIUM FORCEPS

DRAINS 0

PATIENT'S POSITION
SUPINE

TABLE FITTINGS

WOUND ANTIBIOTIC 0

WOUND INFILTRATION 0

SPRAYS 0

CATHETERS 0

DRESSINGS
PARAFFIN GAUZE
DRESSING GAUZE
10 CM CREPE BANDAGE
2.5 CM ZINC OXIDE PLASTER

ADDITIONAL ITEMS 0