
AMPUTATIONS

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WHAT IS AMPUTATION?

- REMOVAL OF LIMB BY TRAUMA, MEDICAL ILLNESS OR SURGERY

INDICATIONS

- PERIPHERAL VASCULAR DISEASE
 - TRAUMA
 - BURNS
 - FROSTBITE
 - INFECTION
 - TUMORS
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I. PERIPHERAL VASCULAR DISEASE (PVD)

- PVD WITH OR WITHOUT DIABETES, WHICH MOST FREQUENTLY OCCURS IN INDIVIDUALS AGE 50-75, IS THE MOST COMMON INDICATION FOR AMPUTATION.
 - APPROXIMATELY HALF OF AMPUTATIONS FOR PVD ARE PERFORMED ON PATIENTS WITH DIABETES
 - RISK FACTOR EVALUATION AND CARE OF THE LIMB IS PARAMOUNT IN DIABETIC PATIENT
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2.TRAUMA

- LEADING CAUSE OF AMPUTATION, PARTICULARLY IN YOUNG, HEALTHY, PRODUCTIVE MEN, HAVING PROFOUND EFFECT ON THEIR LIVES.
 - INCIDENCE OF AMPUTATION IN TRAUMA HAS DECREASED AS A RESULT OF ADVANCEMENT OF MANGLED EXTREMITIES
 - VARIOUS SCORING SYSTEMS [e.g MANGLED EXTREMITY SCORE] ARE USED TO REMOVE SUBJECTIVITY FROM DECISION MAKING
 - DECISION MAKING IS THE KEY—ITS BETTER TO HAVE PROSTHESIS FITTED , PAINLESS FUNCTIONAL LIMB THAN TO HAVE A PAIN-FULL, CHRONICALLY INFECTED FUNCTIONLESS APPENDAGE
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3.BURNS

- THERMAL OF ELECTRIC INJURY
- NOT APPARENT INITIALLY
- INITIAL TREATMENT INVOLVES DEBRIDEMENT, FASCIOTOMIES, WOUND CARE, REPEAT DEBRIDEMENTS APART FROM ADEQUATE ANTIBIOTICS AND CARE OF RENAL FUNCTIONS

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4.FROSTBITE

- ACTUAL FREEZING OF TISSUES IN EXTREMITIES, WITH OR WITHOUT CENTRAL HYPOTHERMIA
 - SERVICEMEN AT HIGH ALTITUDES, CLIMBERS, SKIERS, HUNTERS, HOMELESS, ALCOHOLICS AND SCHIZOPHRENICS AT RISK
 - TISSUE INJURY OCCURS DUE TO 1.DIRECT TISSUE INJURY THROUGH FORMATION OF ICE CRYSTALS IN EXTRACELLULAR SPACE AND 2. ISCHEMIC INJURY RESULTING FROM DAMAGE TO VASCULAR ENDOTHELIUM, CLOT FORMATION AND INCREASED SYMPATHETIC TONE
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5.INFECTIONS

- ACUTE OR CHRONIC INFECTION UNRESPONSIVE TO ANTIBIOTICS AND SURGICAL DEBRIDEMENT
 - USUALLY DONE IN TWO STAGES
 - ACUTE INFECTION IS MOSTLY DUE TO 1. CLOSTRIDIAL MYONECROSIS 2 STREPTOCOCCAL MYONECROSIS AND 3ANAEROBIC CELLULITIS
 - CHRONIC OSTEOMYELITIS AND INFECTED NON-UNION MAY IN SOME CASES REQUIRE AMPUTATION
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6.TUMORS

- RECENT ADVANCES HAVE MADE LIMB SALVAGE A REASONABLE OPTION FOR MOST PATIENTS WITH BONE OR SOFT TISSUE SARCOMA
 - FOUR ISSUES MUST BE CONSIDERED WHEN CONTEMPLATING LIMB SALVAGE INSTEAD OF AMPUTATION
 - 1.EFFECT ON SURVIVAL OF RX
 - 2.SHORT & LONG TERM MORBIDITY
 - 3.FUNCTION OF SALVAGED LIMB COMPARED WITH PROSTHESIS
 - 4.PSYCHOLOGICAL CONSEQUENCES
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SURGICAL PRINCIPALS

- I DETERMINATION OF LEVEL OF AMPUTATION-multifactorial and involves clinical evaluation, indication, general condition and type of prosthesis available.
 - 2TECHNICAL ASPECTS a. Skin cover should be judiciously anticipated and muscle flap should be thick and muscles are divided 5 cm distal to intended bone cut
 - B HEMOSTASIS should be achieved before final closure
 - C. NERVES meticulous attention paid to prevent painful neuroma
 - D BONE , avoid periosteal stripping, rasp sharp edges and adequate soft tissue cover
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POST-OPERATIVE CARE

- ANTIBIOTICS
 - DVT PROPHYLAXIS
 - ADEQUATE PAIN MANAGEMENT
 - CARE OF STUMP, DRESSING, PHYSIOTHERAPY
 - FITMENT OF PROPER PROSTHESIS
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COMPLICATIONS OF AMPUTATIONS

- 1 HEMATOMA
 - 2 INFECTIONS
 - 3 WOUND NECROSIS
 - 4 CONTRACTURES
 - 5 PAIN—PHANTOM LIMB SENSATION
 - 6 DERMATOLOGICAL PROBLEMS
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AMPUTATIONS OF FOOT

- TOE AMPUTATIONS
 - TERMINAL SYME AMPUTATION
 - MTP DISARTICULATIONS
 - RAY AMPUTATION
 - TRANSMETATARSAL AMPUTATION
 - MIDFOOT AMPUTATIONS[CHOPART]
 - HIND FOOT AND ANKLE AMPUTATIONS—SYME —bone section at distal tibia and fibula 0.6 cm prox to ankle joint SARMINTO -1.3 cm prox to ankle joint BOYD —TALECTOMY, FORWARD SHIFTING OF TALUS AND CALCANEO-TIBIAL ARTHRODESIS. PIROGOFF—arthrodesis of tibia with part of calcaneum
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AMPUTATIONS OF LOWER EXTREMITY

- TRANSTIBIAL BELOW KNEE AMPUTATION
 - DISARTICULATION OF KNEE
 - TRANSFEMORAL ABOVE KNEE AMPUTATION
 - DISARTICULATION OF HIP
 - HEMIPELVECTOMY
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AMPUTATIONS OF UPPER EXTREMITY

- HAND AMPUTATIONS
 - WRIST AMPUTATIONS
 - TRANSRADIAL AMPUTATION
 - ELBOW DISARTICULATION
 - TRANSHUMERAL AMPUTATION
 - SHOULDER DISARTICULATION
 - FOREQUATER AMPUTATION
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PHANTOM LIMB

THANKS
