

The Osteocutaneous Distal Tibia Turn-over Fillet Flap: A Novel Spare-parts Orthoplastic Surgery Option for Functional Below-knee Amputation

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Abstract : This article portrays the authors' experience with a complex lower limb bone and soft tissue defect, following chronic osteomyelitis and pathological fracture, which was managed by the multidisciplinary orthoplastic team. The decision for functional amputation versus limb salvage was deemed necessary, enhanced by the principles of "spares parts" in reconstructive microsurgery. This case describes a successful use of the osteocutaneous distal tibia turn-over fillet flap that allowed 'lowering the level of the amputation' from a through knee to the conventional level of a below-knee amputation to preserve the knee joint function. This case demonstrates the value of 'spare-parts' surgery principles and how these concepts refine complex orthoplastic approaches when limb salvage is not possible to enhance function. The osteocutaneous distal tibia turn-over fillet flap is a robust technique for modified BKA reconstructions that provides sufficient bone length to achieve a tough, sensate stump and functional knee joint.

Keywords : osteocutaneous flap, fillet flap, spare-parts surgery, Below knee amputation

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