

Introduction

The leg has several characteristics that make it susceptible to unique problems. The anteromedial portion of the tibia is largely covered by skin and subcutaneous fat. This relatively unprotected anatomy leads to many instances of bone exposure, which require specialized soft-tissue coverage in the event of injury. The bones of the leg are the tibia and the fibula. The tibia provides 85% of the weightbearing capacity of the leg, whereas the fibula serves as a structure for muscle and fascial attachments and as a significant structural portion of the ankle joint. *Kasabian And Karp (2007)*

Soft-tissue defects of limbs commonly occur in the context of high-energy trauma. Standard reconstructive paradigms serve as a broad guide to planning that can be tailored to the demands of the situation. Simple reconstructive options such as secondary intention healing, delayed primary closure or skin grafting have a role in smaller defects or where tissue loss has not left important or relatively poorly vascularised tissues exposed.

Sananpanich et al., (2008)

Frequently, however, a more durable and expedient soft-tissue coverage is required. Particular areas in limbs require thin and pliable fasciocutaneous flaps to reconstruct soft-tissue defects, especially in the distal parts of limbs, knee and elbow joints. *Sananpanich et al., (2008)*

The specificity of the lower leg is in sparse collateral blood flow of the skin cover in the middle and distal part, reduced subcutaneous tissue and the prominence of the front side of tibia immediately under the skin. These characteristics of the lower leg make the application of the standard

plastic reconstructive principles, which have been applied in the other regions of the body to a certain degree very difficult. The progress of anatomical knowledge in relation to vascularization of the tissue territories-angiosoma, and the anatomy of the vascular skin system of the lower leg, along with the technological progress represented by the application of the surgical microscope, new surgical instruments and suture materials, provides the reconstructive surgeon, not only with classic but also with the modern surgical methods in this region: microvascular transplantation of the tissue and the application of the fasciocutaneous reversible flaps.

Kozarski et al., (2000)

Mathes and Nahai introduced the conventional reconstructive ladder in 1982 to address tissue defects starting with secondary and primary closure of wounds followed by autologous skin grafting. Regional and local pedicled flaps, tissue expansion and free tissue transfer were further steps.

Knobloch And Vogt (2010)