

Faut-il couvrir précocement les fractures Gustillo III-B de jambe?

Do we need to cover Gustillo-B fractures of the tibia early?

Goals of these workshops

- To provide clinical expertise to deal with Gustillo III-B fracture of the tibia in adults

GUSTILLO CLASSIFICATION

(describes soft tissue injury)

- Grade I: wound less than 1 cm with minimal soft tissue injury; wound is clean
- Grade II: wound is greater than 1 cm with moderate soft tissue injury; wound is moderately contaminated
- Grade III-A: wound less than 10 cm with crushed soft tissue; highly contaminated wounds
- Grade III-B: wound greater than 10 cm with crushed soft tissue; highly contaminated wounds
- Grade III-C: B+ major vascular injury

Amputation?

(Decision to be taken early)

High velocity open tibia fracture, with nerve, artery, and/or massive soft tissue disruption;

Types IIIB and IIIC tibial fractures associated with numb foot or major bone injuries;

Open tibia fractures with severe co-morbidity (elderly patients, kidney failure etc);

Classic notions

- Primary closure
- Flaps
- Shortening/closure/lengthening

- Secondary closure
- Spontaneous cicatrisation/skin graft
- VAC

Is there evidence-based guidance for timing of soft tissue coverage of grade III-B tibia fractures?

early aggressive debridement followed by soft tissue cover within 3 to 5 days reduces osteomyelitis and delayed bone union

Breugem CC Int J Low Extrem Wounds 2006

Secondary closure:

- Give more infectious complications (Current evidence indicates that infections after treatment of open fractures frequently are not caused by initial contaminating organisms but often are acquired in the hospital. *Weitz Marshall, 2002*)
- Requires longer hospitalisation
- Are less cost effective
- Seems to increase the rate of non-union

FLAPS

Gopal S, Fix and flap: the radical orthopaedic and plastic treatment of severe open fractures of the tibia.

JBJS 2000

Weitaz-Marshall AD, Timing of closure of open fractures.

J Am Acad Orthop Surg. 2002

Tu YK, Soft-tissue injury management and flap reconstruction for mangled lower extremities.

Injury 2008

Conclusions (Level 2)

- Consider amputation, if not:
- Debride then,
- Fix then,
- Flap

First part: flaps

- Gastrocnemius (jumeaux)
- Soléus (Soléaire)
- Ilio-inguinal

Second part: external fixation

- Basic principals of external fixation
- The Gex Fix

Thank you

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- Eric Voiglio, Amphit atre de Lyon
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thanks