



# Suturing: Advanced

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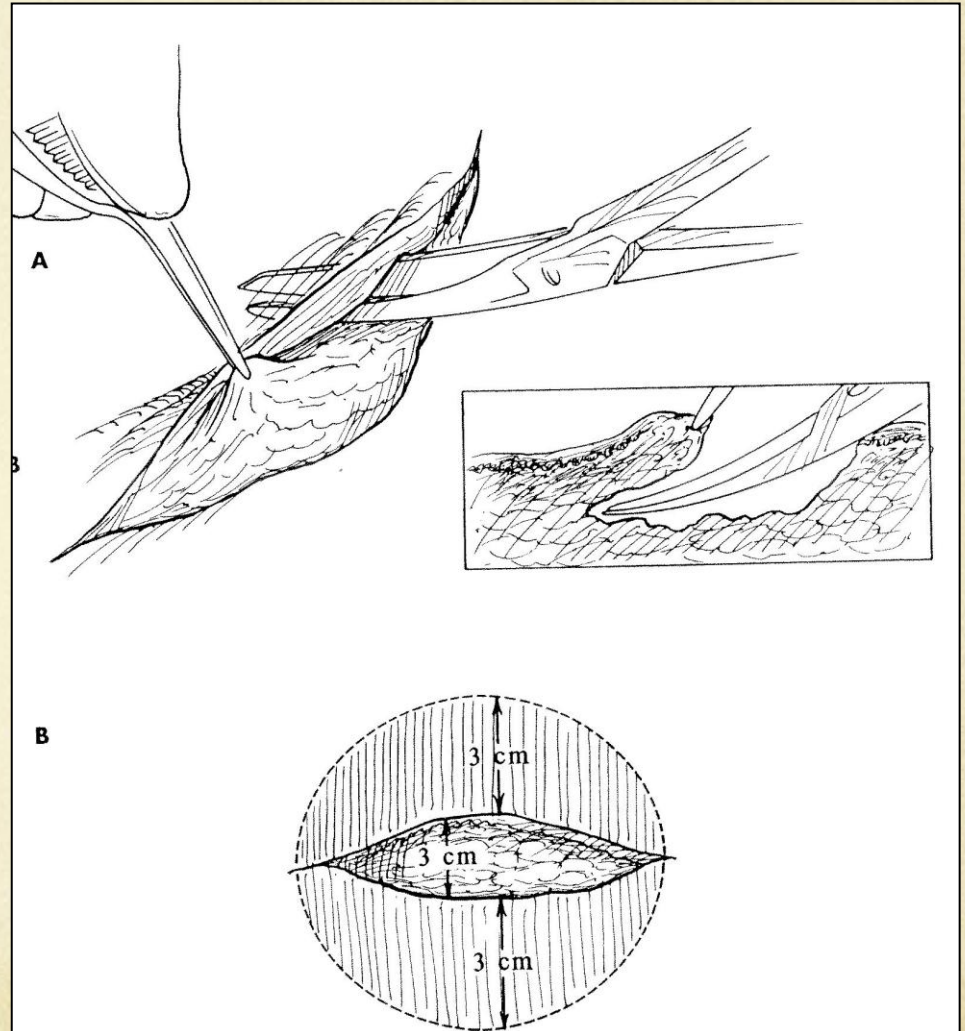
# Learning objectives

- Perform undermining and deep tissue suturing
- Suture an elliptical wound
- Master the suturing of the following wounds :
  - Parallel
  - T-V-Y



# Undermining

- Frees the subcutaneous tissue to reduce tension on the edges of the wound



**FIG. 9-9** Technique for tissue undermining. **A**, Note that scissors are used for dissection at the dermal superficial fascia level. Tissue spreading is preferred to cutting the sharp edges. **B**, The zone of undermining is illustrated.

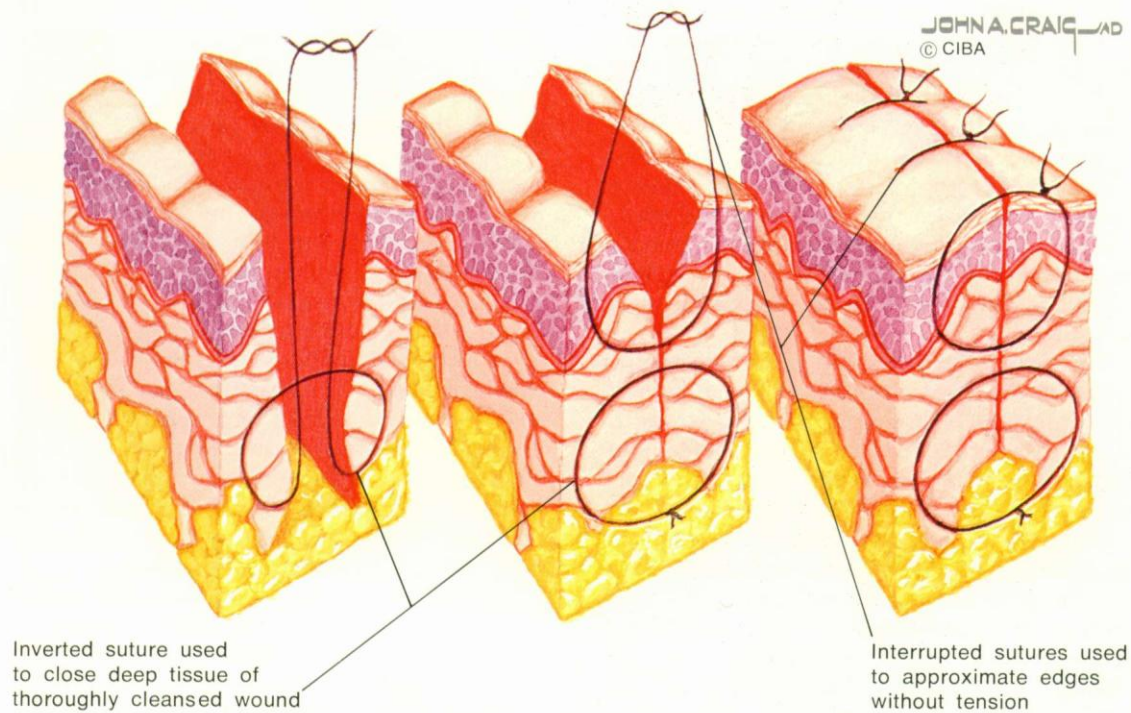
# Deep tissue suturing

## Wound Closure

An acceptable technique

Plate 9

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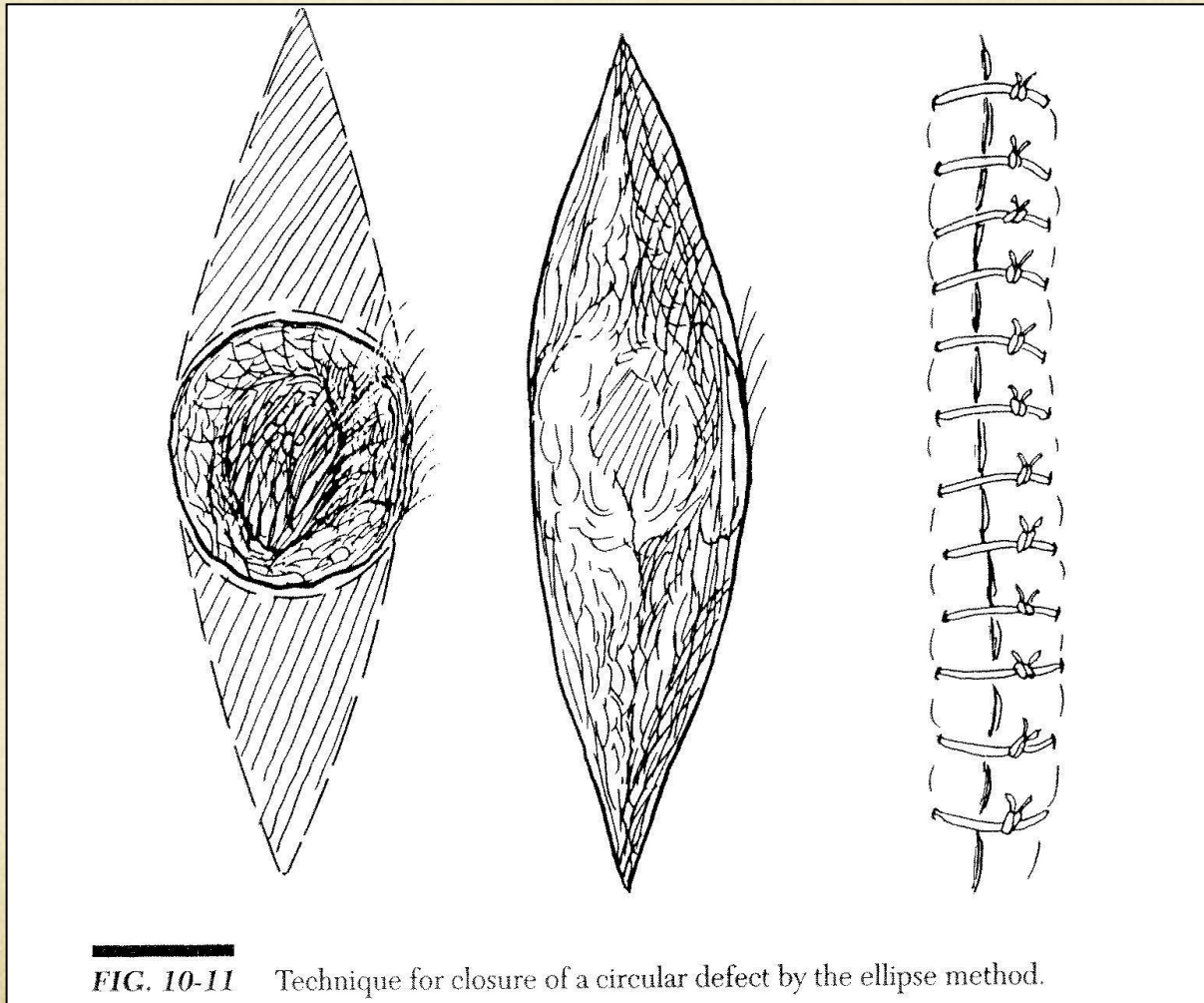




# Deep tissue suturing

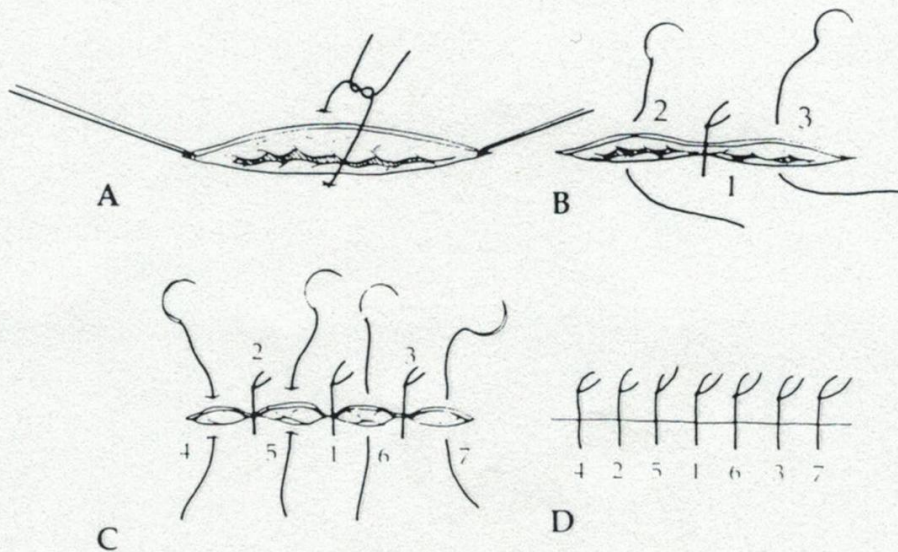
- Better distribution of tension
- No dead space that could lead to abscess, hematoma
- Facilitates eversion
- Better healing

# Elliptical wound





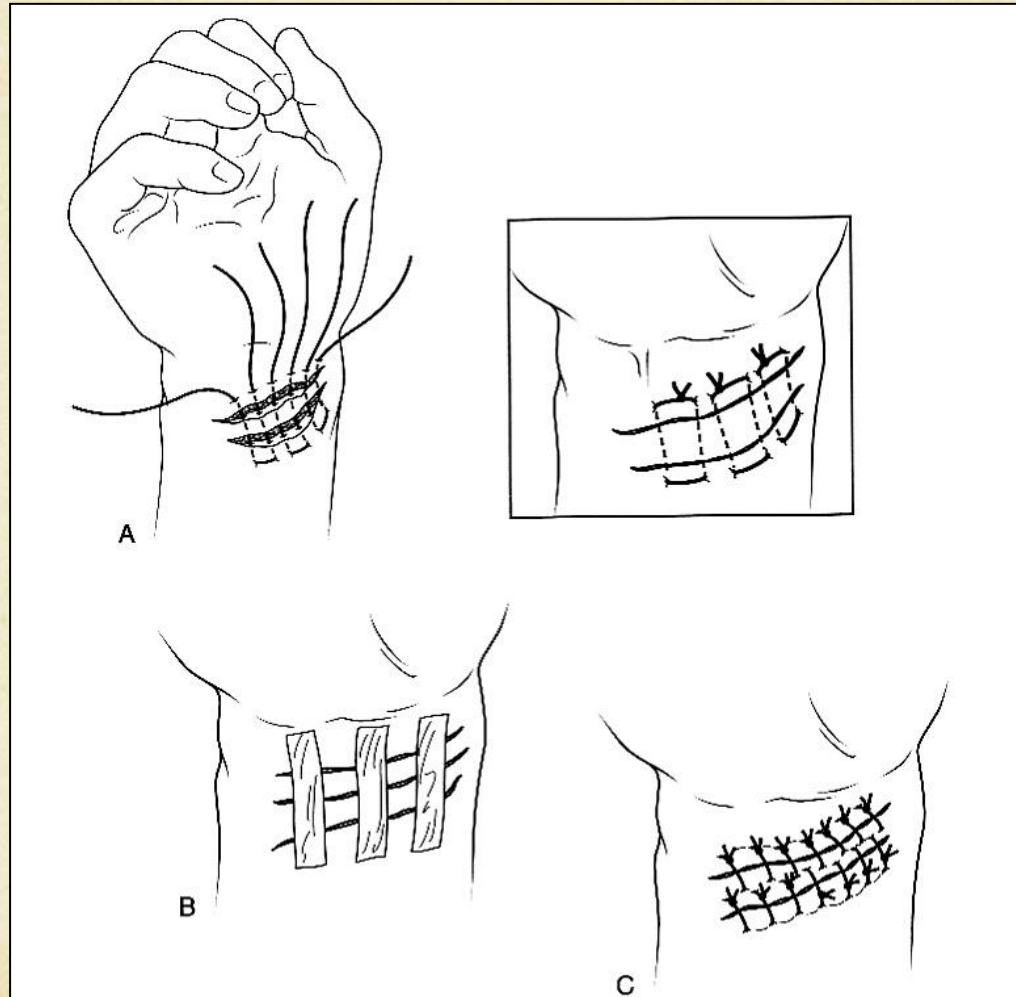
# Elliptical wound



*Figure 3-* . The "split the difference" method of suture sequencing is most useful for malaligned wounds.

- Align the wound with skin hooks. Place the initial suture (1) at the middle of the laceration.
- Place the next sutures (2 and 3) on both of the remaining halves of the wound.
- Repeat the sequence with sutures 4, 5, 6, and 7.
- Final position and sequence.

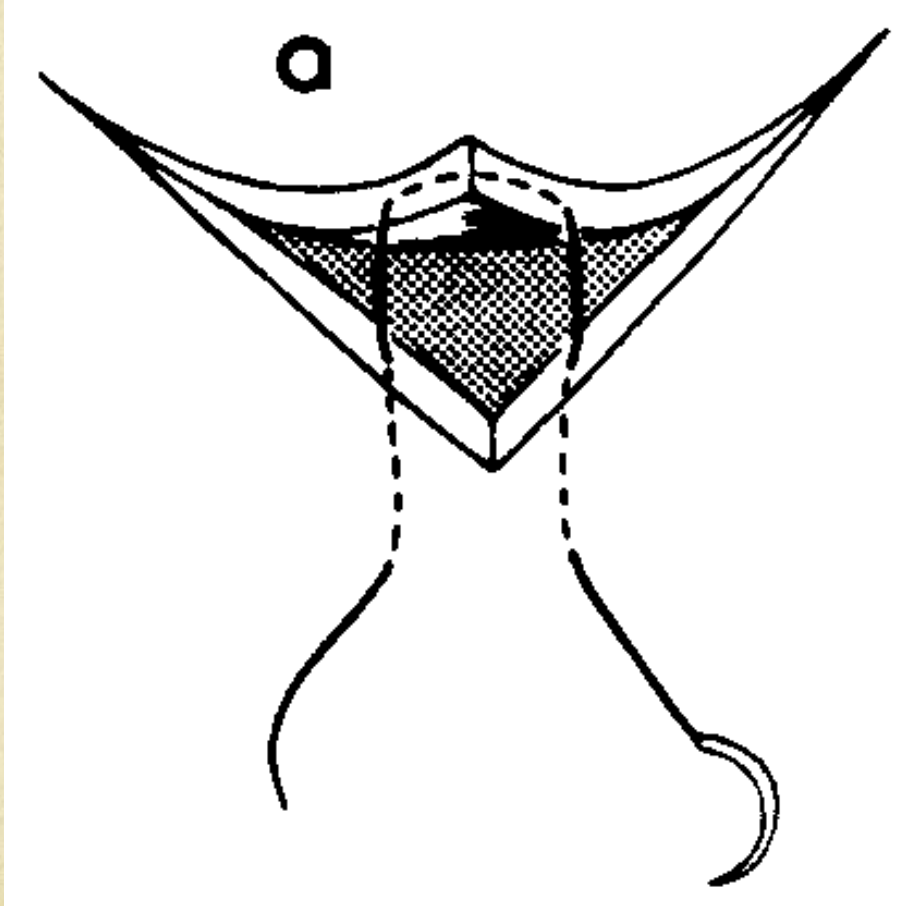
# Parallel wounds



**Figure 11-14** Three techniques for closure of parallel lacerations. **A**, The horizontal mattress technique is used to cross all lacerations for closure. **B**, Wound tapes can be used to close these lacerations. **C**, If the island of tissue is wide enough, alternating sutures can be used on each laceration. It is necessary, however, to be careful not to compromise vascular supply when using this technique. (Adapted from Zukin D, Simon R: Emergency wound care: principles and practice, Rockville, Md, 1987, Aspen Publishers.)

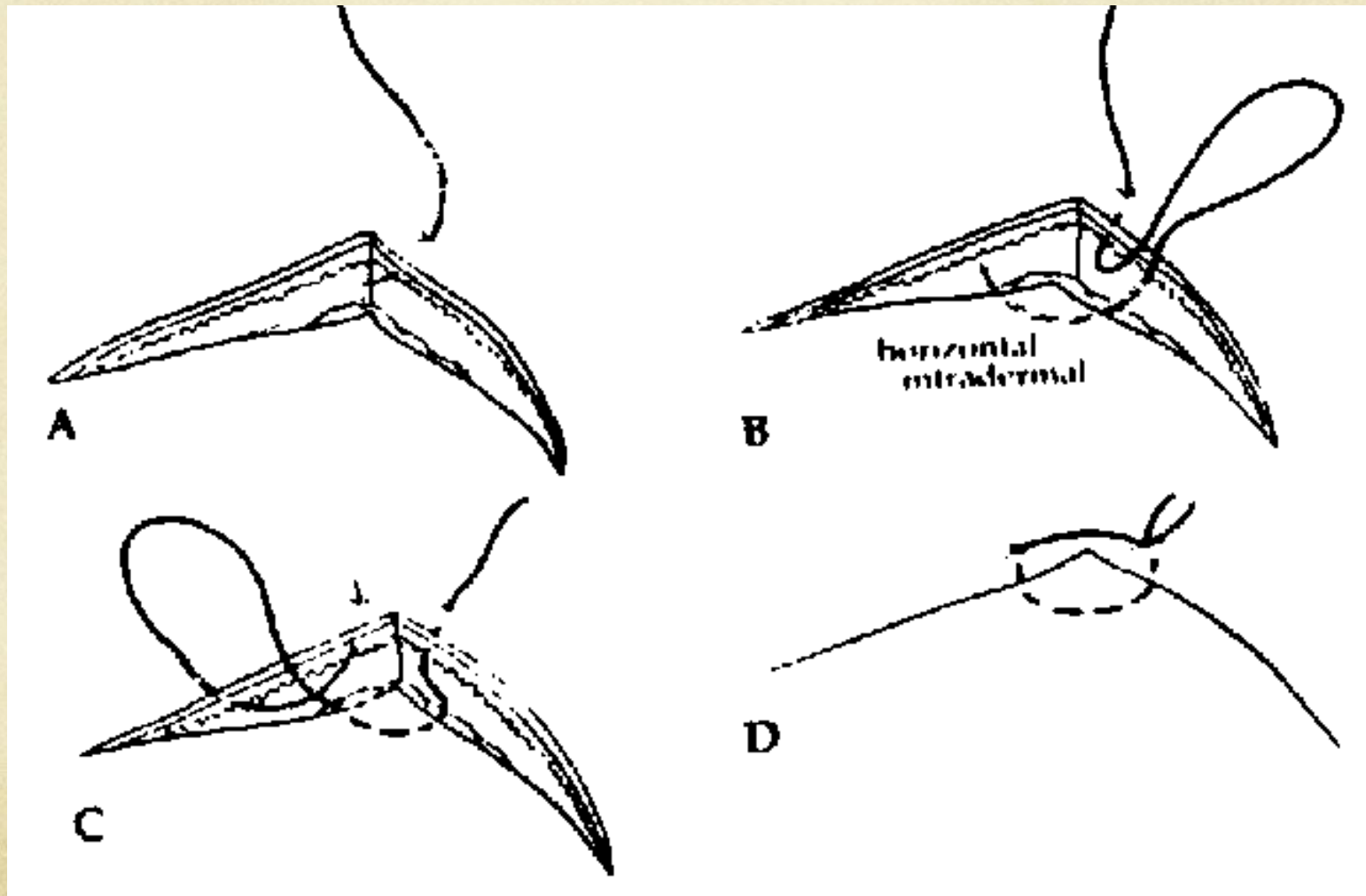


# T-V-Y wound



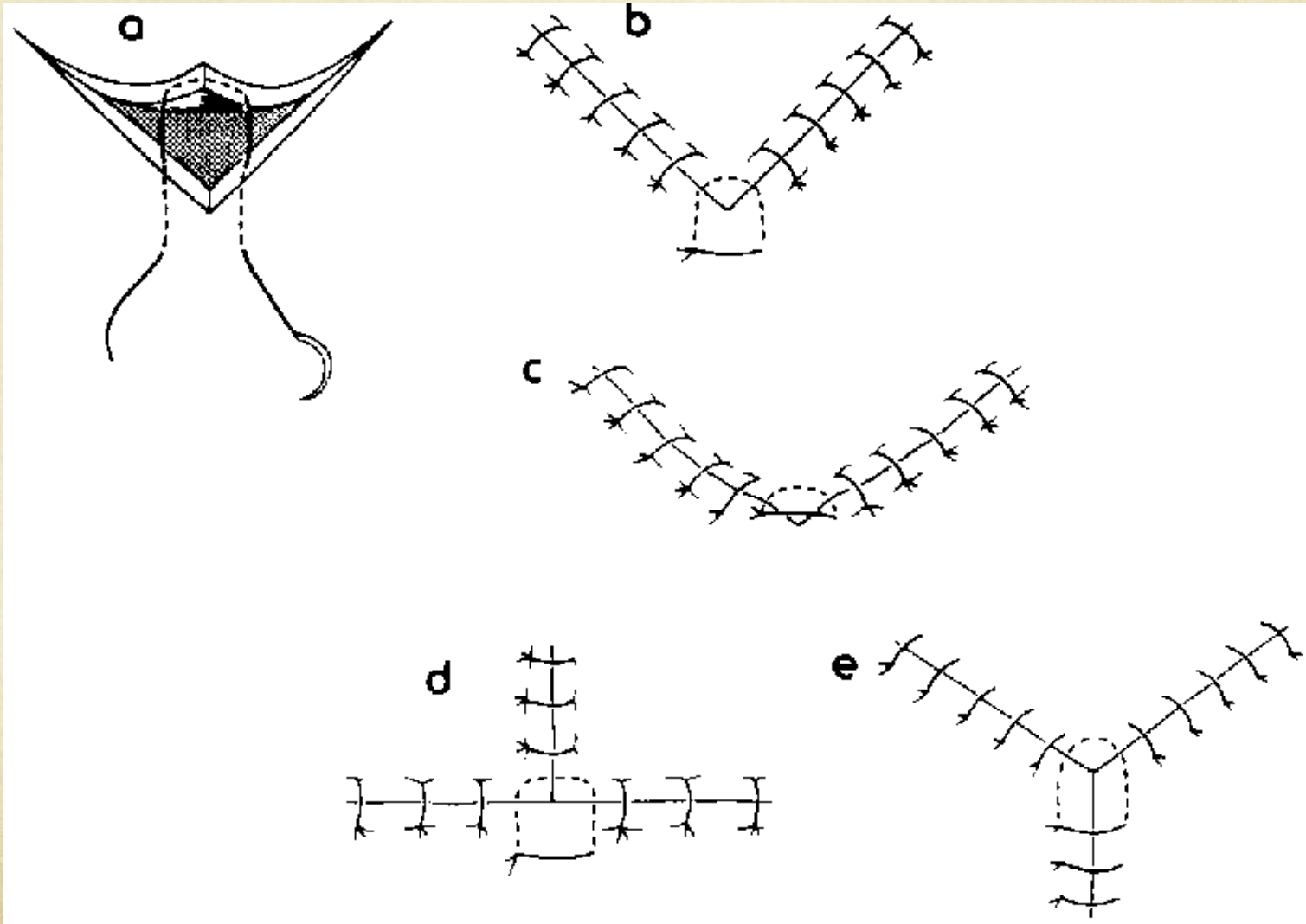
- Better for the blood supply to the flap
- Approximation of the edges is more difficult
- Risk of injury to the flap

# T-V-Y wound

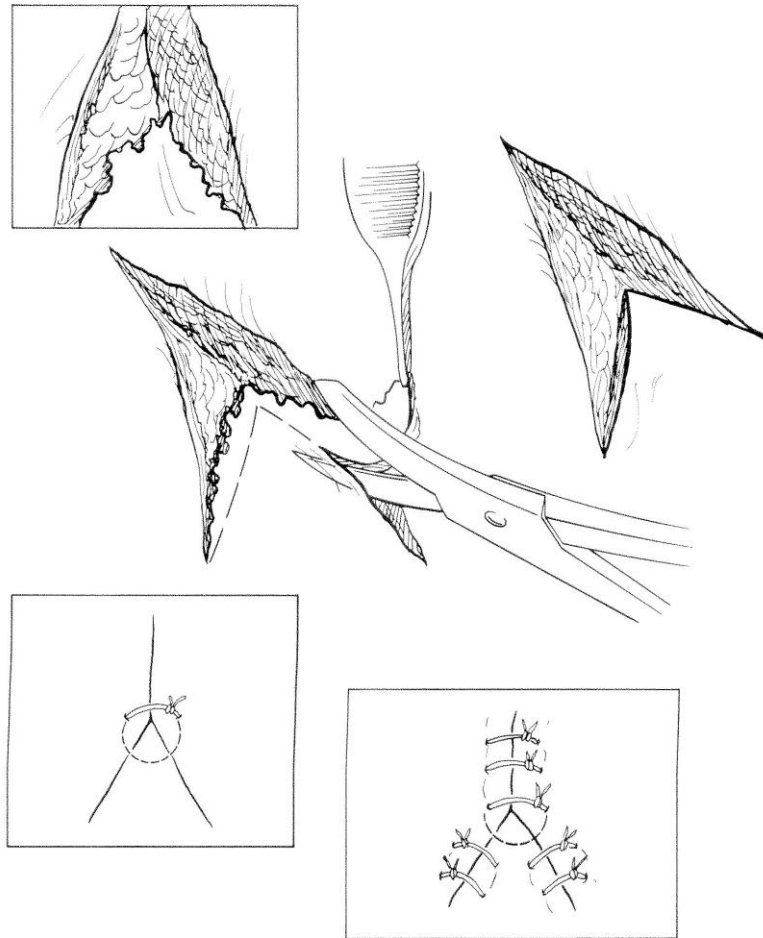




# T-V-Y wound



# T-V-Y wound



**FIG. 10-8** Technique for closure of flaps with nonviable edges: the V-Y closure. Note that the edges of the flap are excised. The remaining flap is not large enough to fill the defect; therefore a corner stitch is placed to close the wound as a Y instead of its original V configuration.



# References

- Trott, Alexander T. - Wounds and Lacerations :  
Emergency Care & Closure. - Mosby Inc, 2005.