

Introduction in Plastic Surgery

Surgery in Low Resource Settings
Workshop November 16th 2014

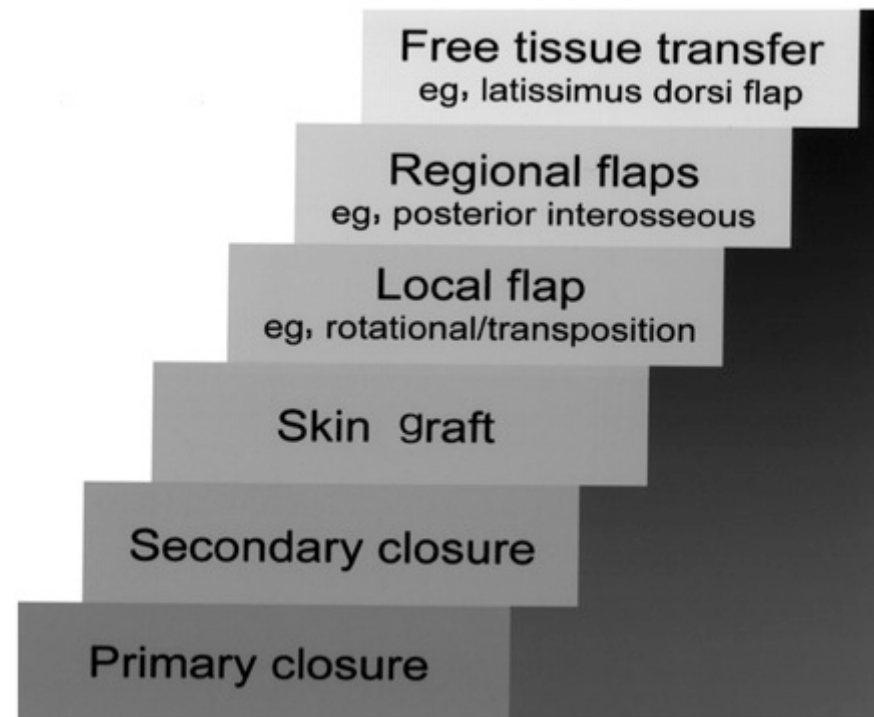
Jan E Sluimers plastic and reconstructive surgeon

Content

1. History and concepts of Plastic Surgery
2. Types of local tissue transfer
3. Practical session
4. Types of tendon reconstruction
5. Practical session

1. History and concepts in Plastic Surgery

- Reconstructive ladder

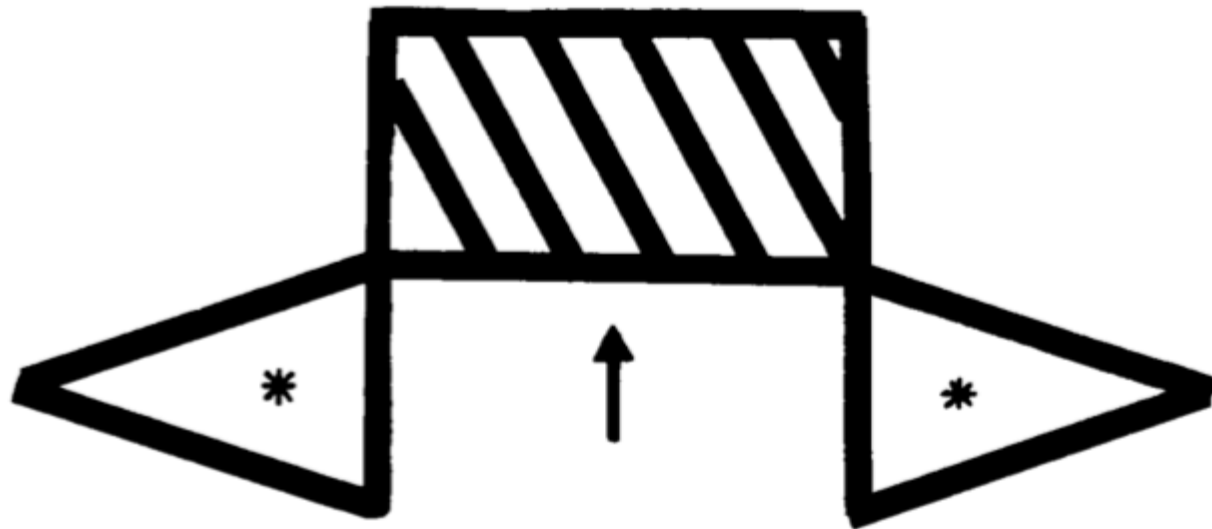


2. Types of local tissue transfer

- Advancement flap
- Rotation flap
- Transposition flap
- Turnover flap

advancement

- Advancement is sliding , gliding , shifting in the plane of the skin.



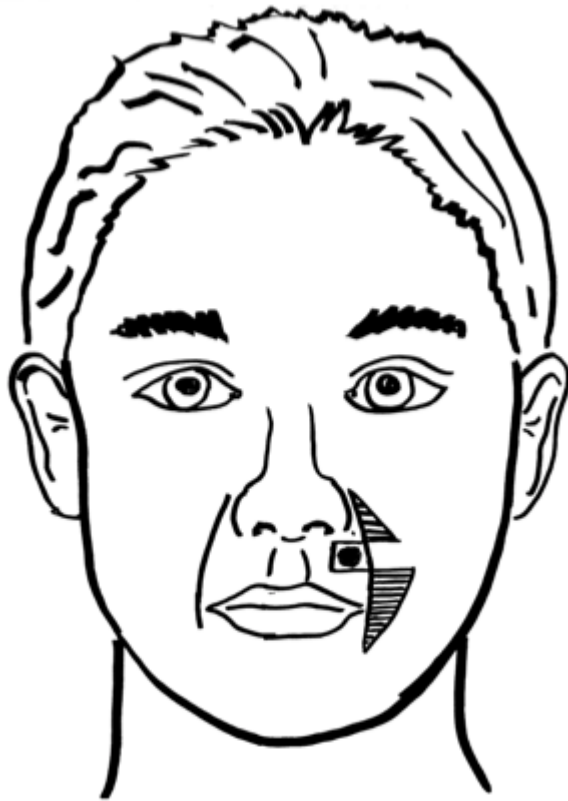
Advancement

A tumor of the upper lip can be a difficult problem



A simple solution for a difficult problem

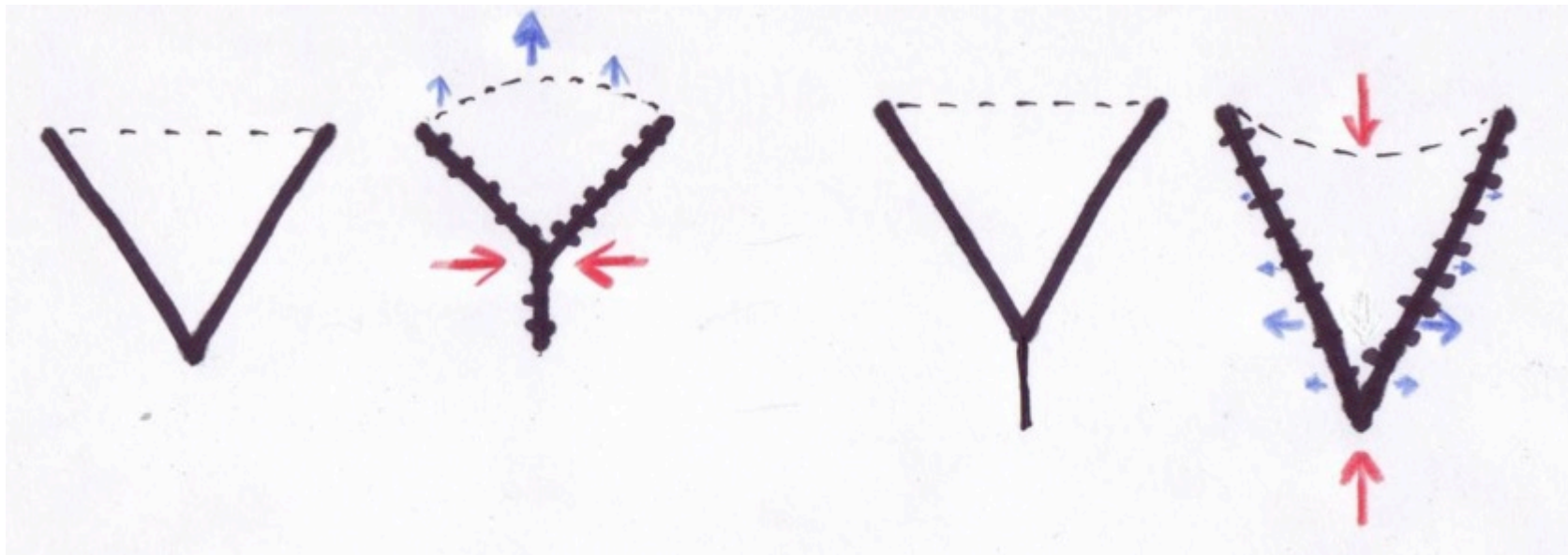
Planning the triangles in such way that the scar is in the nasolabial fold



Advancement

Triangular advancement:

2 different ways: V to Y and Y to V

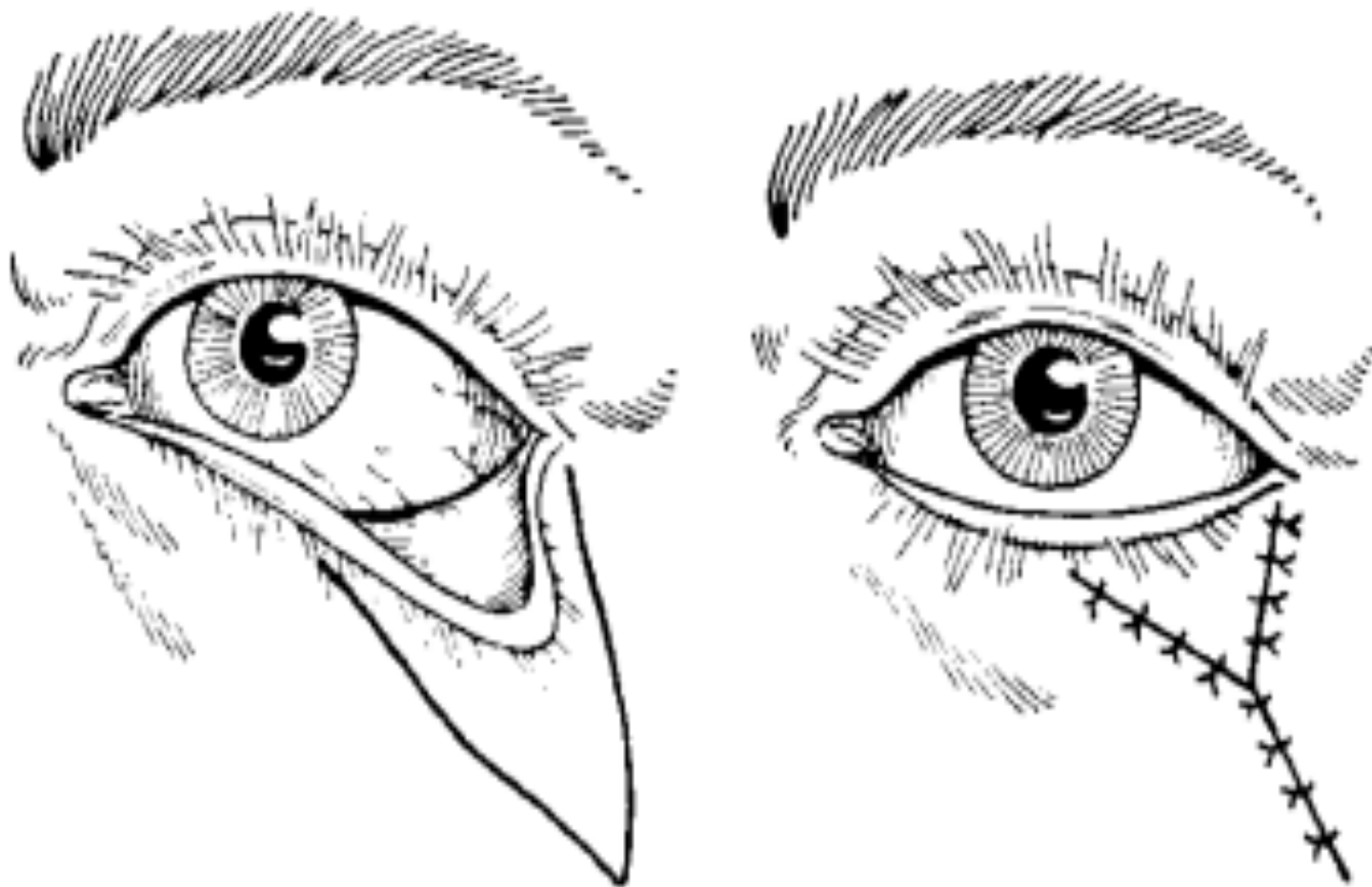


Pushing skin out of the V

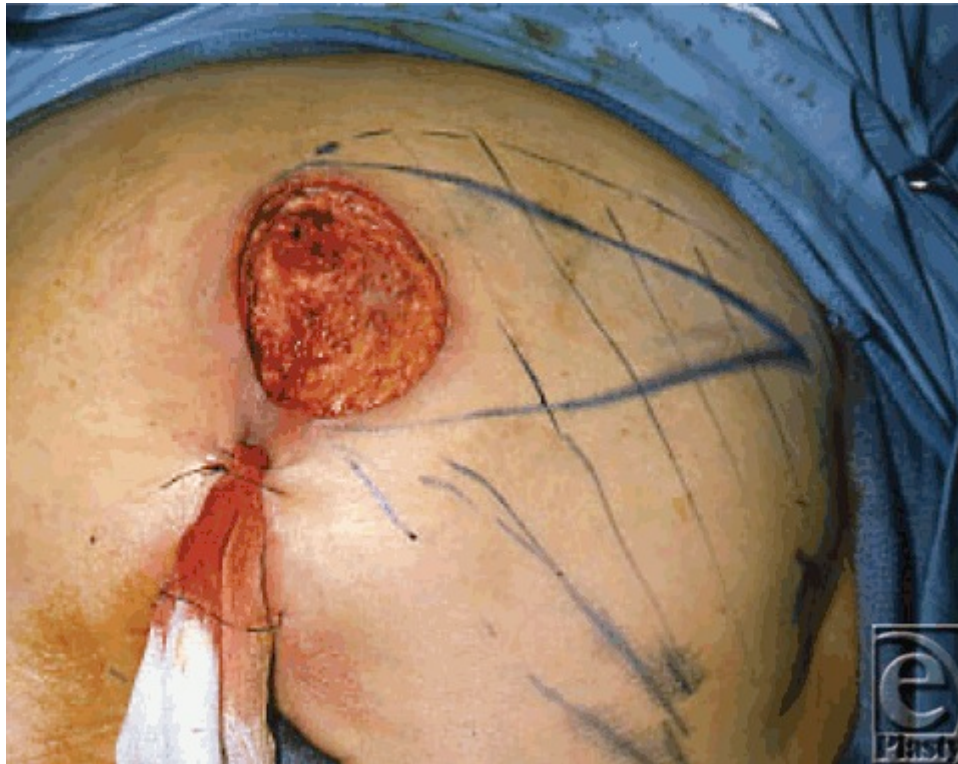
and

Pulling skin into the V

Avancement



Myocutaneous advancement



sacral decubitus ulcer
to be closed by V-Y-
advancement with a
myocutaneous flap

Muscle and skin sliding on the inferior gluteal pedicle



sacral decubitus ulcer
to be closed by V-Y-
advancement with a
myocutaneous flap

Skills:

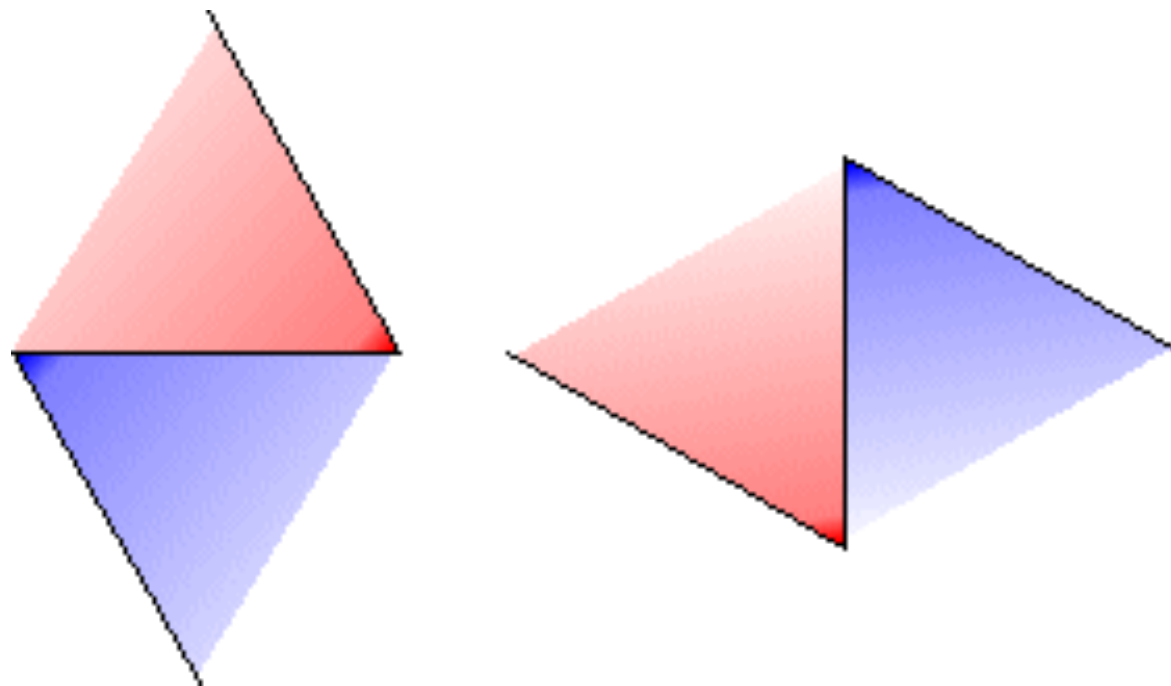
V to Y advancement

- Please create a defect of 2 by 2 cm
- And design a v>y advancement
- Now cut the V and be sure the center of the flap is still attached to the subcutaneous layer
- Shift it into the defect and suture.

Transposition : Z-Plasty

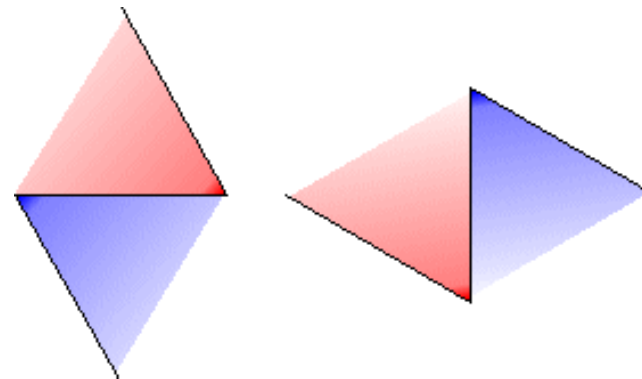
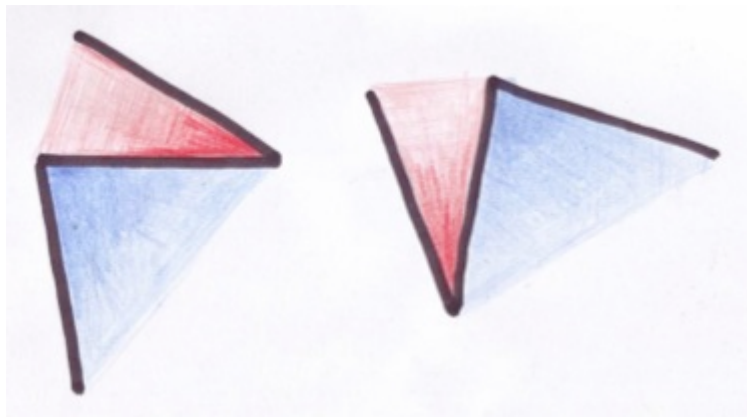
- A Z-plasty is a procedure in which two triangular flaps change position
- Z-plasties are used in areas with contracture or contracture bands, where the tension in the skin is increased

Z-plasty



Z-Plasty

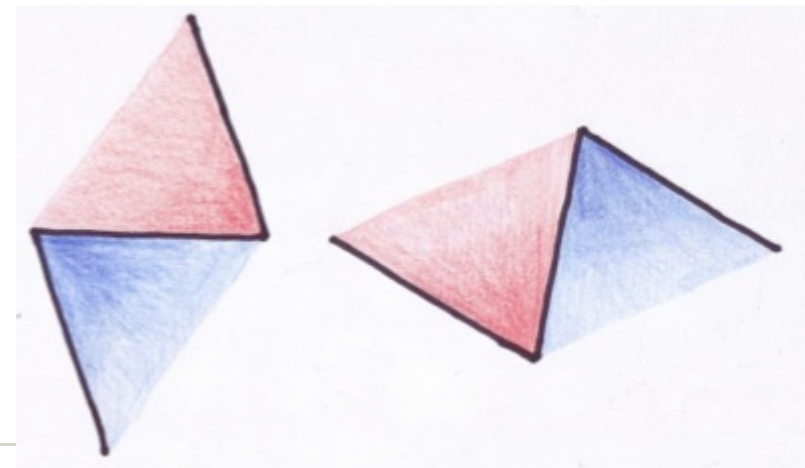
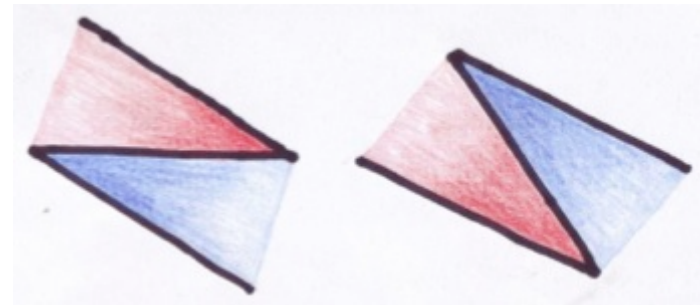
A Z-plasty changes the direction of tension in the area of the procedure



Z-plasty

The wider the angle,
the more change of
direction of tension and
more redistribution of
tissue

Angles ± 60 degrees



How should you define the length
of the legs of the Z plasty ?
By doing this:.....



The legs of the Z plasty should
not exceed the slack of the skin

Skills: Advancement Flap Z-Plasty

Enough of this boring theory !

Let us make our favourite 60/60 degrees Z-plasty, but now in the design of the letter N with triangle sides of 5 cm, then cut the plasty and suture it with a few sutures

Clinical practice

Now design a Z plasty with 45 / 45 degree angles and 5 cm leg length measure the acquired length •

What is now your gain and why is that important

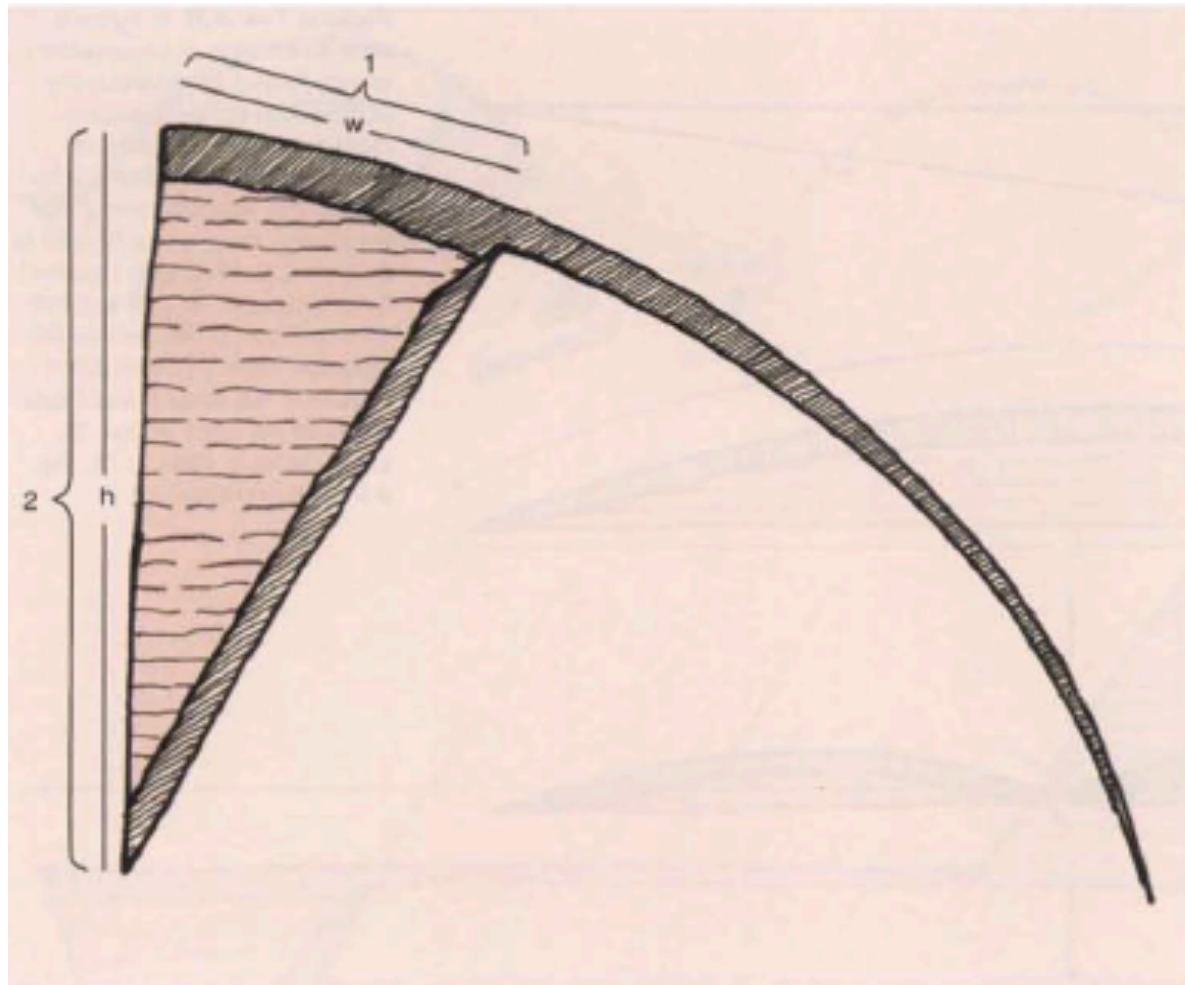
Rotation Flap



The principle: moving a large area of skin into a skin defect along a curved line

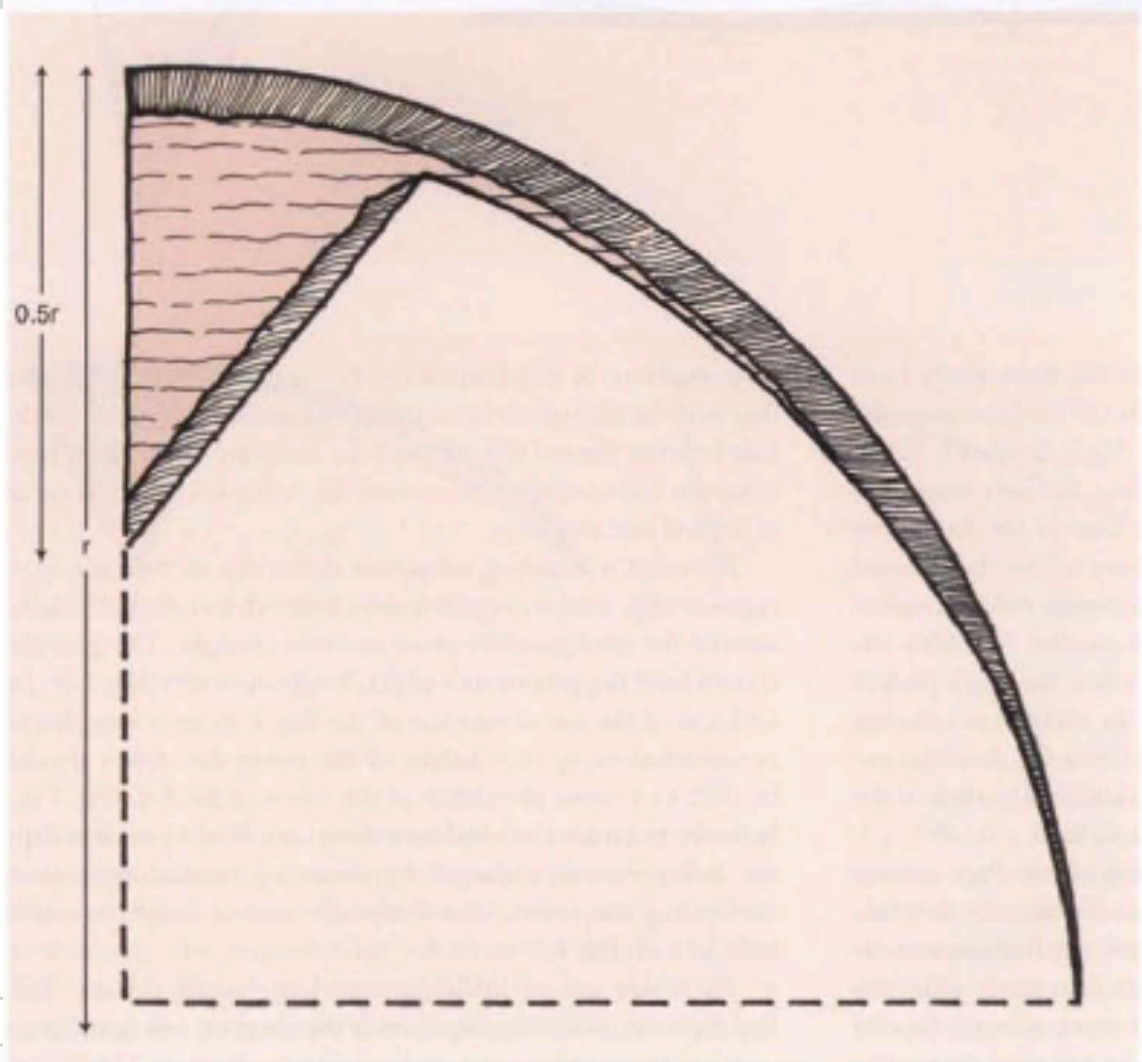
Rotation Flap

- To minimize standing cutaneous deformity at the base of the rotation flap the triangular defect has a height-to-width ratio of 2:1



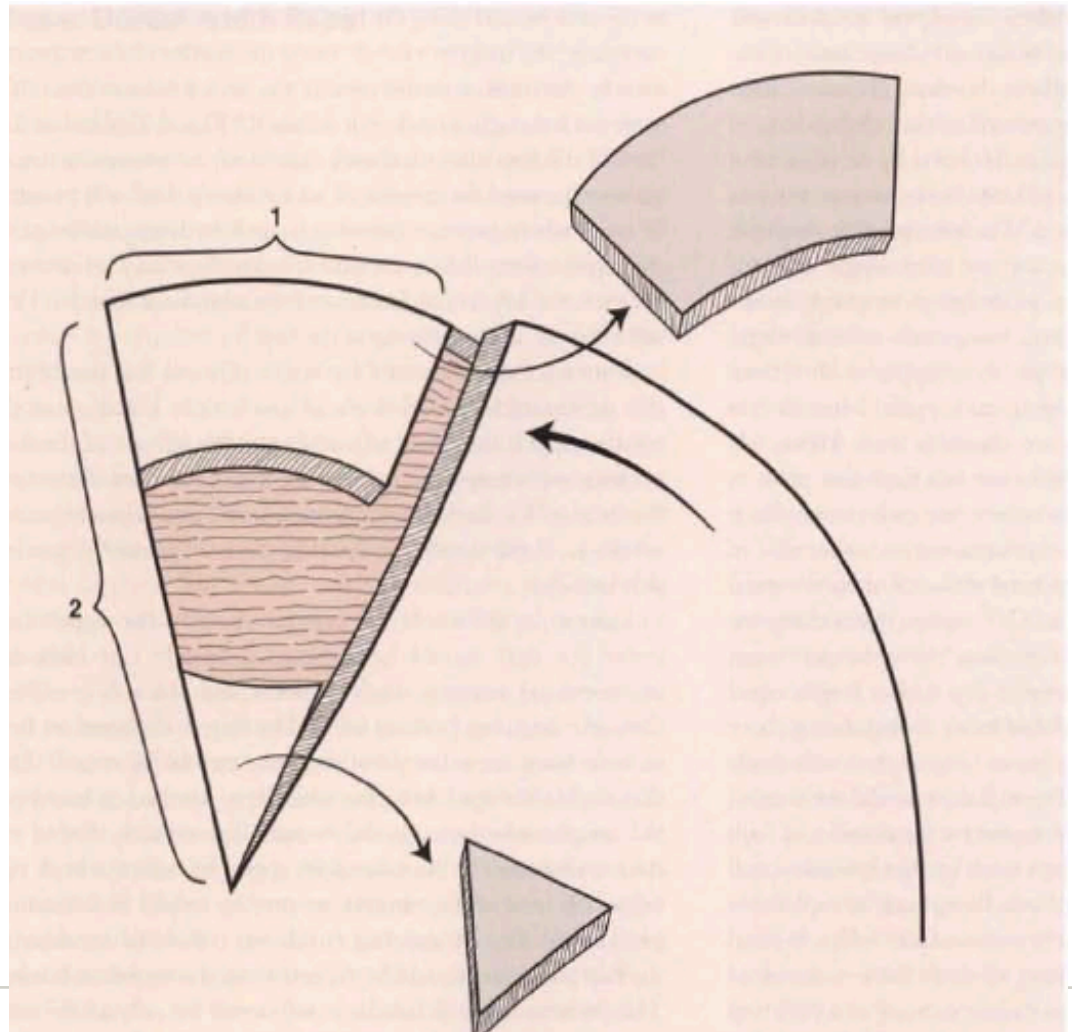
Rotation Flap

For symmetric rotation the height of the triangular defect should be 0.5 to 1 times radius (r) of the curvature of the flap's border



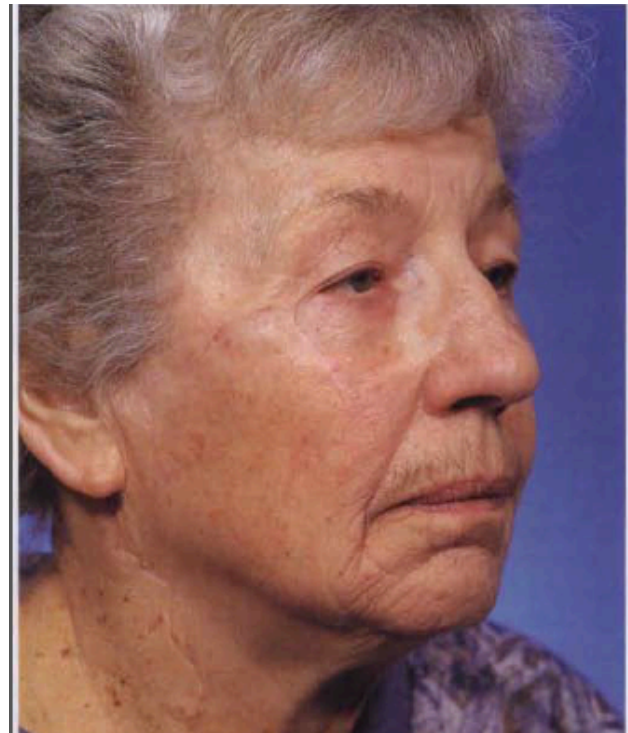
Rotationflap

To create an ideal condition for the use of a rotation flap, the defect is enlarged by removing healthy tissue and convert the defect in the triangle (2:1)

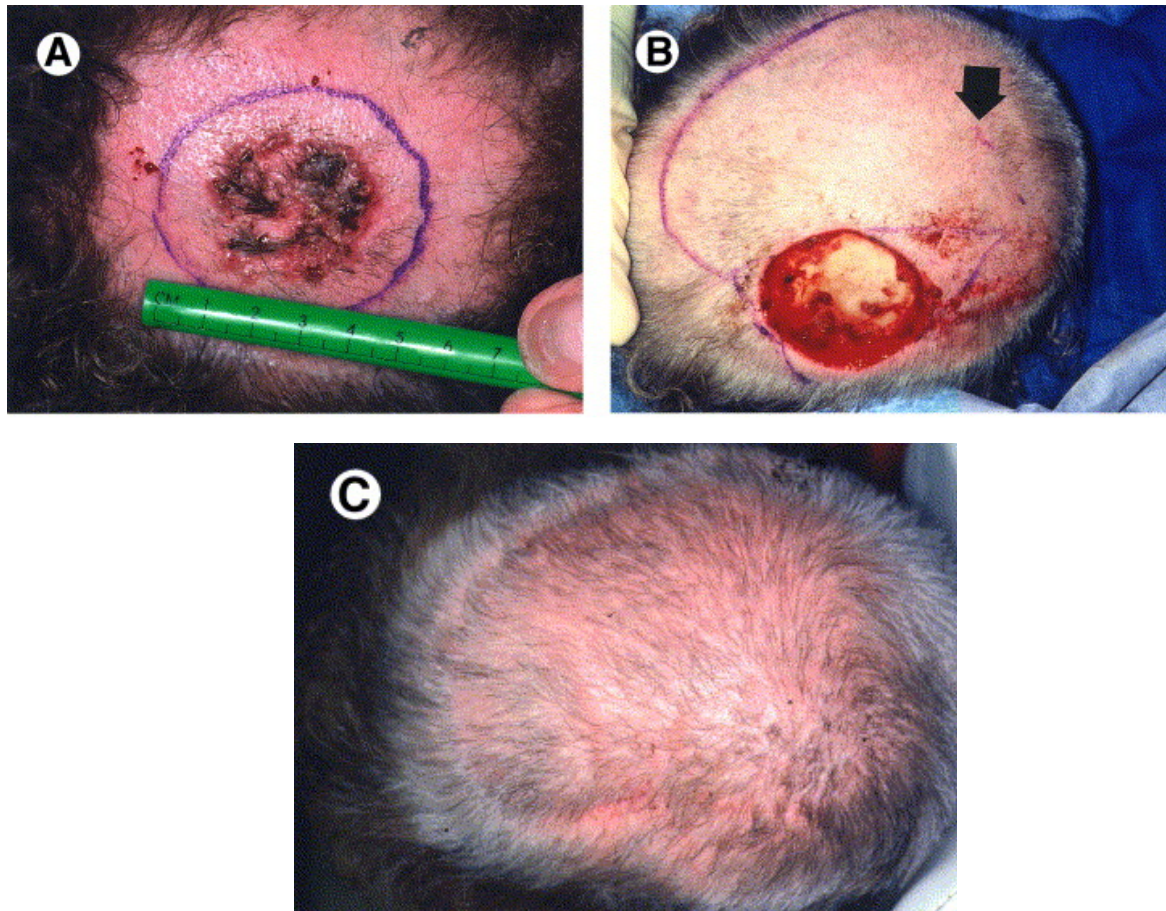


Rotation Flap

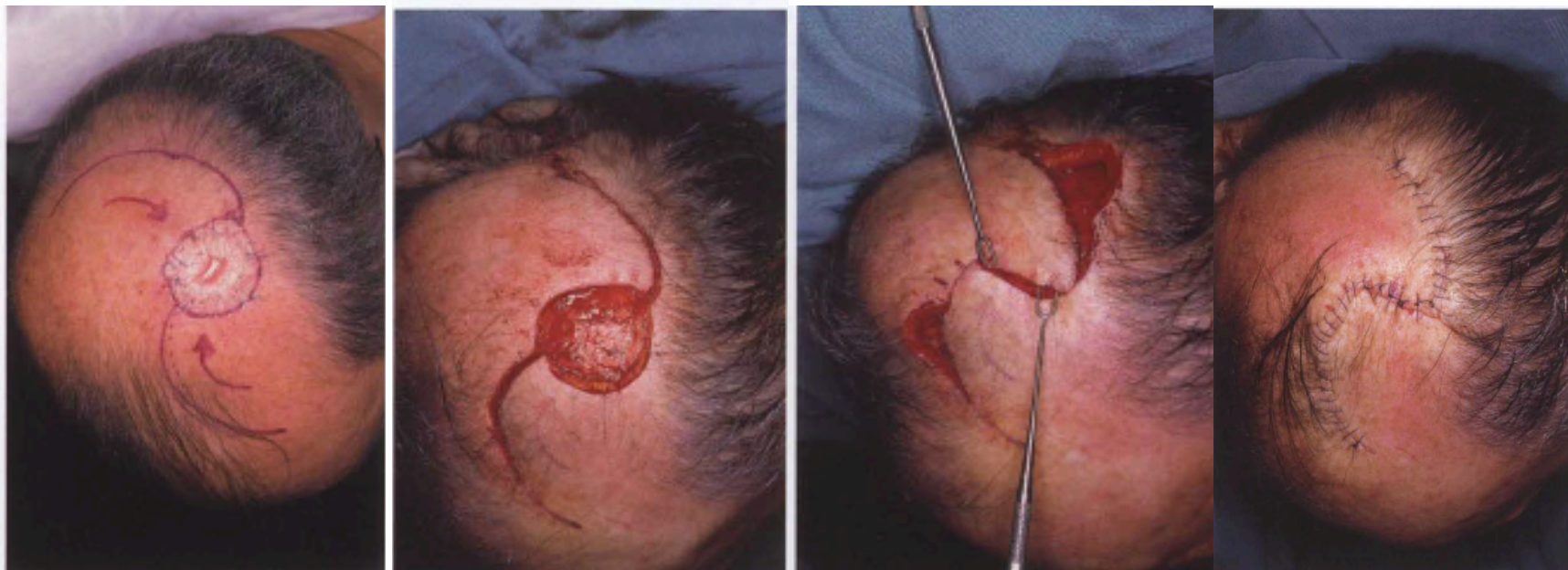
There is no exact defined pivot point as the flap is rotated and shifted (advanced) into the defect



Rotation Flap



Rotation flap

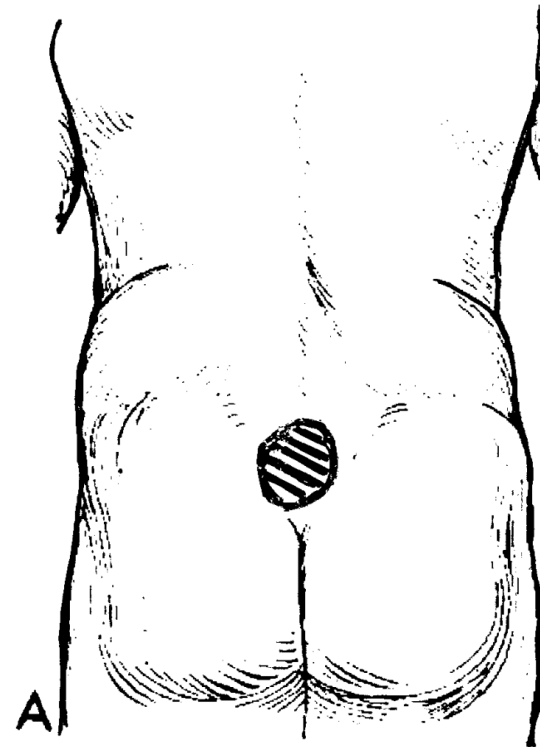


To minimize the circumference of the rotation flap
2 clockwise rotated flaps can be used

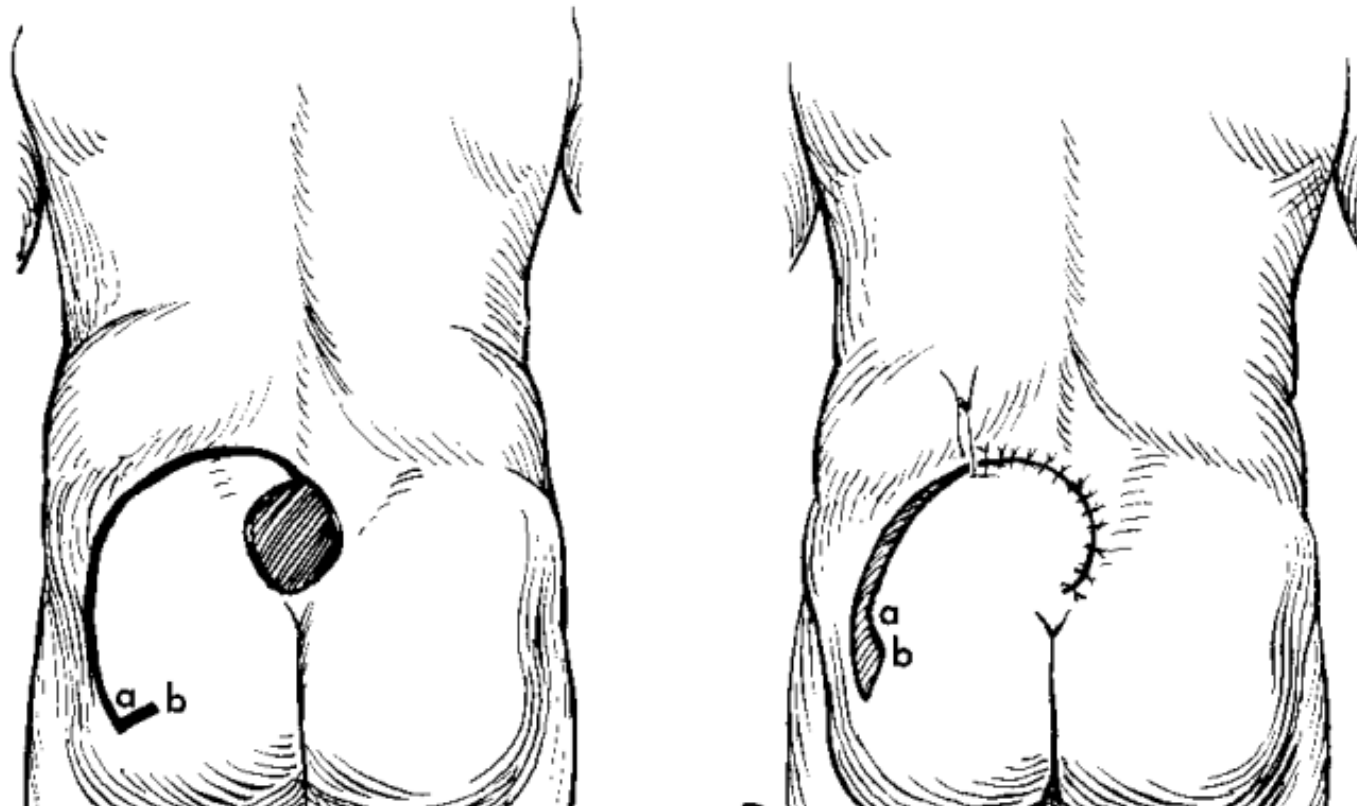
Rotation Flap

Make a sketch of this back

- add this sacral decubitus ulcer
- design an excision
- design reconstruction with a rotation flap

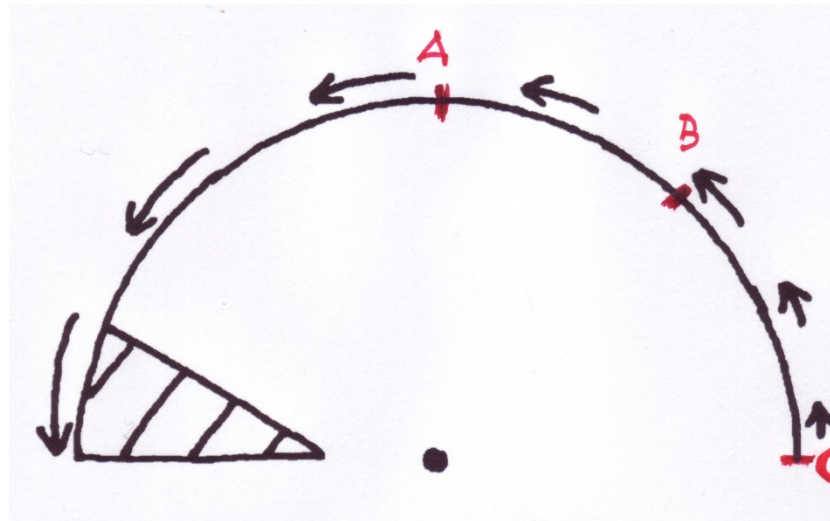


Excision and Reconstruction with a Rotation Flap



Skills: Rotation Flap

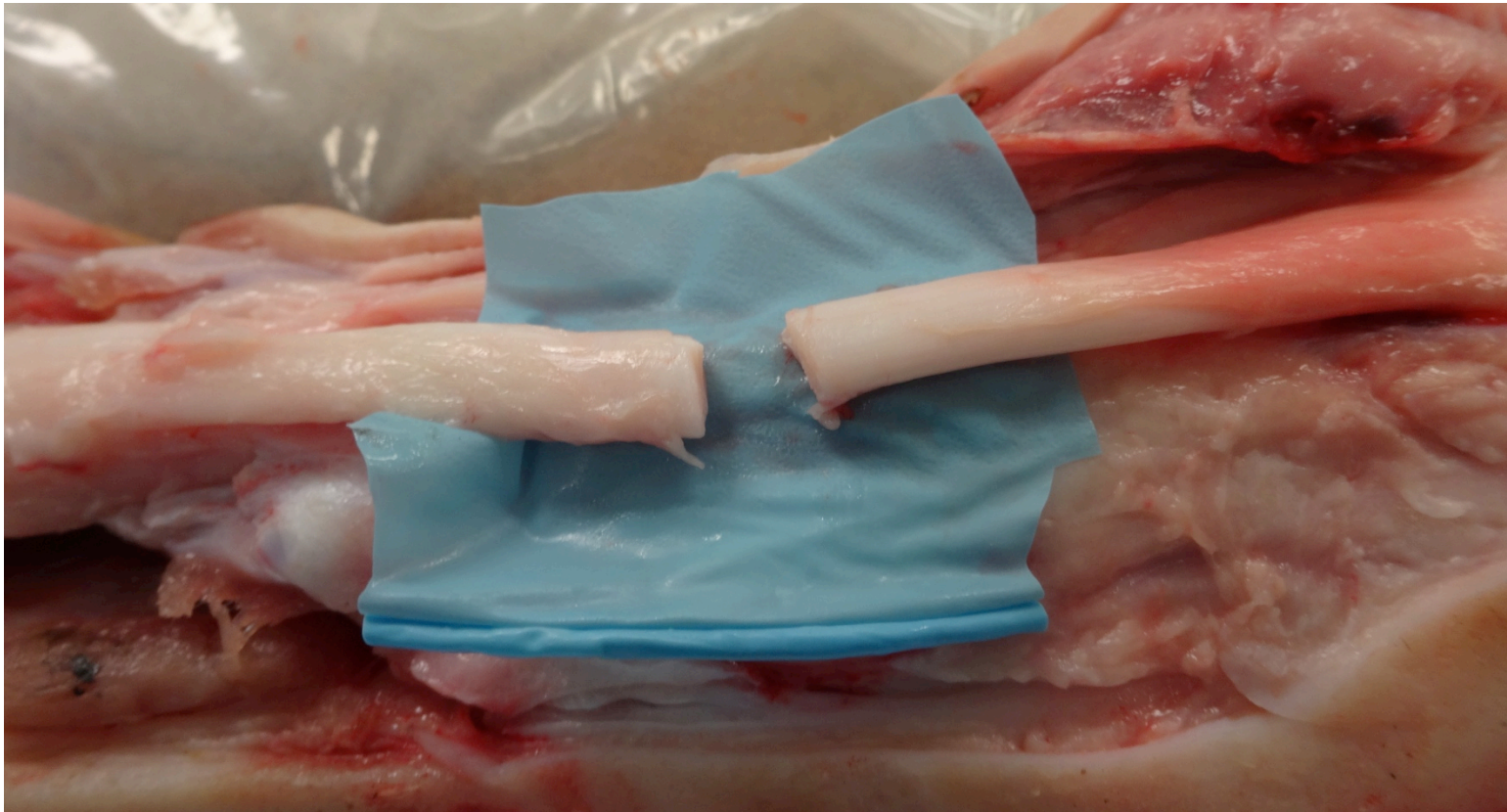
- Draw a circle with a radius of 8 cm
- Mark the points A, B and C



Skills: Rotation Flap

1. Cut out the triangle to make the defect
2. Cut the flap to A, try to close the defect
3. Cut the flap to B, try to close the defect
4. Cut the flap to C, try to close the defect
5. Observe
6. Make a small back cut at C, and see what happens

Tendon suturing



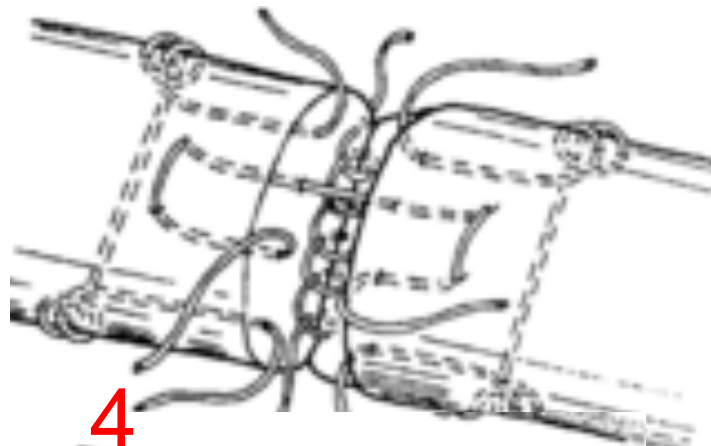
Strickland 4 - strand technique

Strickland 4-strand technique

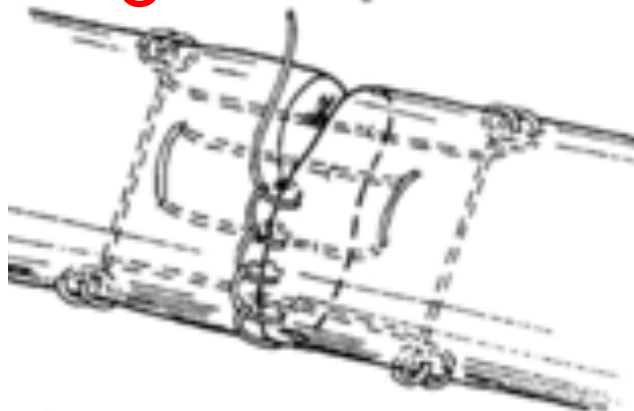
1



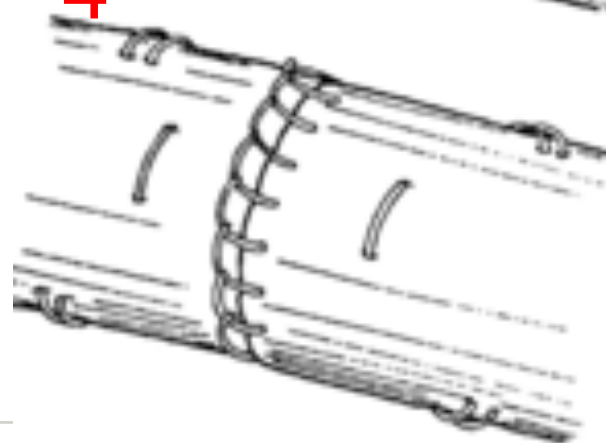
2



3

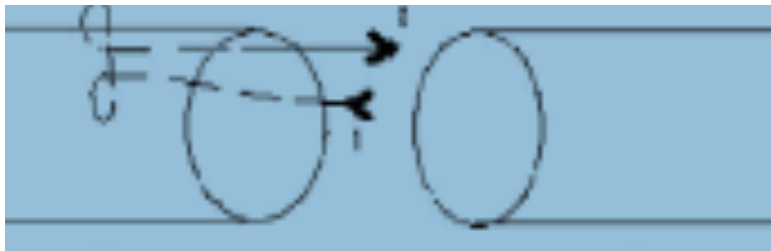


4

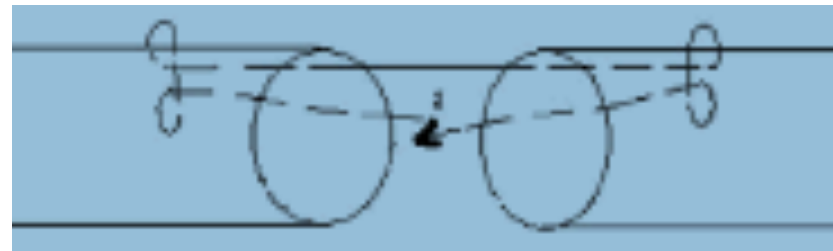


Lahey 4-strand repair

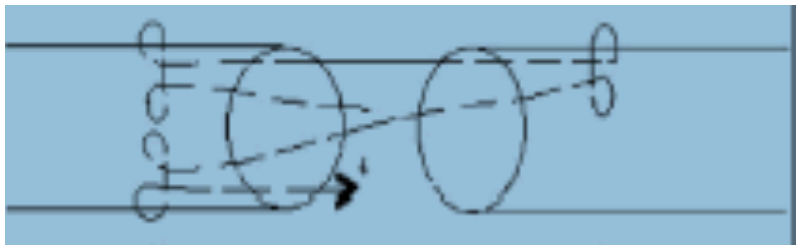
1



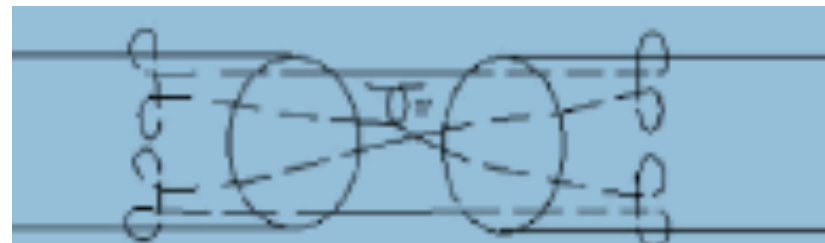
2



3

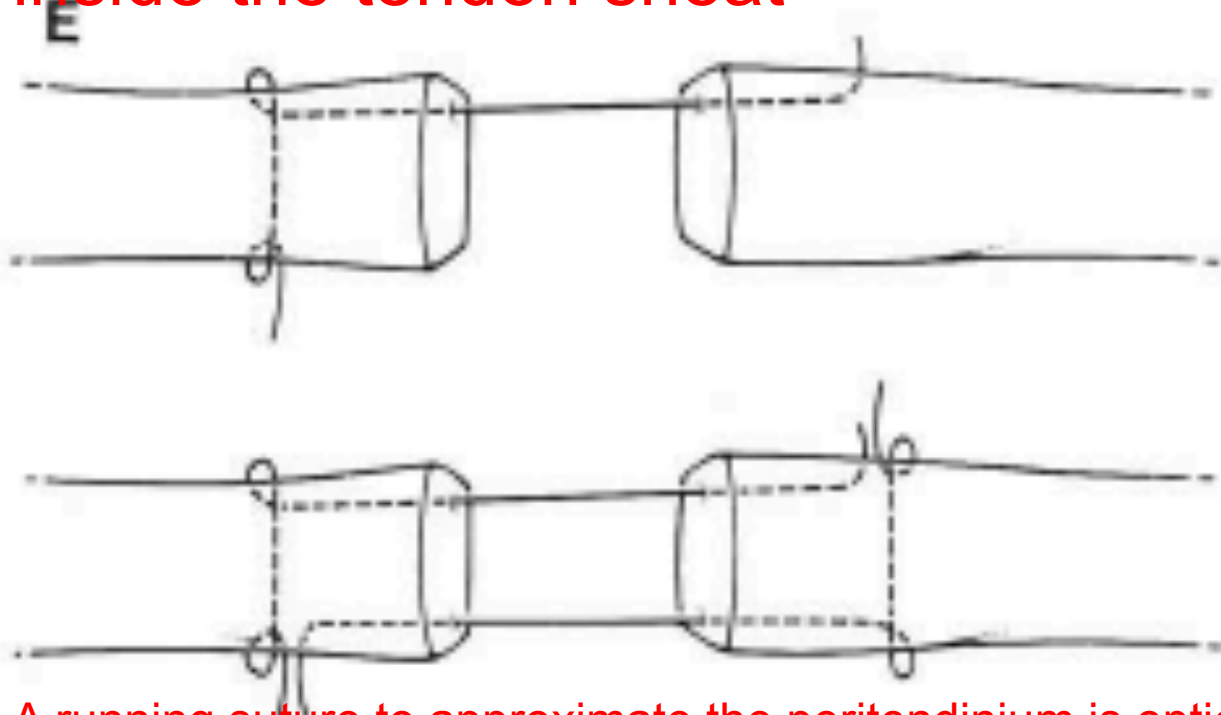


4



Kessler grabbing suture

Preferably used in small tendons
inside the tendon sheath



A running suture to approximate the peritendinium is optional

**more able
hands give
superior results**

**But always keep
it:**

**SAFE--
SIMPEL--
SOUND --
SATISFACTORY**





NETHERLANDS SOCIETY
FOR INTERNATIONAL SURGERY



Deutsche
Gesellschaft für
Tropenchirurgie



Nederlandse
Vereniging
voor Heelkunde



NEDERLANDSE
ORTHOPAEDISCHE
VERENIGING | NOV



NVPC



International Safe
Motherhood
& Reproductive
Health

SYMPOSIUM
SURGERY IN LOW RESOURCE SETTINGS
NOVEMBER 14TH–16TH 2014

WHAT
IS YOUR
ROLE?

LAB111 Amsterdam - www.surgicalneed.nl



AHP

AFRICA HEALTH
PLACEMENTS

WWW.AHP.ORG.ZA



NYENBURGH INVESTMENT PARTNERS

va.

communication by design



ThesisApps

VERSPREID JE PROEFSCHRIFT ALS MOBIELE APP



REDERIJ DE NEDERLANDEN

BELEEF AMSTERDAM