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Connecting The Vascular Community

VEITH SYMPOSIUM 2024

HOW TO PERFORM ALL VASCULAR OPERATIONS THROUGH SMALL INCISIONS: TECHNICAL TIPS. WHY IS IT ADVANTAGEOUS AND RESULTS: WHEN IS IT CONTRAINDICATED

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DISCLOSURE

Speaker name:

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I have the following potential conflicts of interest to report:

- Consulting
- Employment in industry
- Shareholder in a healthcare company
- Owner of a healthcare company
- Other(s)

X I do not have any potential conflict of interest

OPERATION

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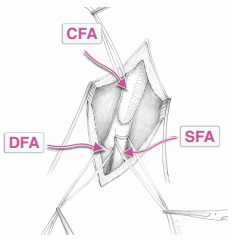
TECHNIQUE-RETROPERITONEAL

Important aspects of the operation's technique



Incision in the groin

4-5 cm skin incision is done over femoral bifurcation reaching the artery by tissue separation

Artery separation

Vessel loops are placed on CFA, SFA and DFA
Longitudinal arteriotomy is made over CFA or SFA after proximal anastomosis is performed.

OPERATION

VEITH SYMPOSIUM®

TECHNIQUE-RETROPERITONEAL

Important aspects of the operation's technique

Incision

8-10 cm vertical (slightly curved) incision must be done at the level of umbilicus and down; 6-8 cm laterally to midline

Reaching

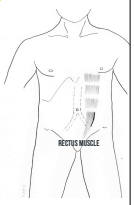
Reaching the fascia by adipose tissue separation

Fascia incision

Longitudinal incision of anterior layer of exterior oblique abdominis muscle aponeurosis

Arcuate Line

Carefull separation of peritoneum must be done from the level of Arcuate Line (Peritoneum tearing should be sutured at once)!!!



OPERATION

VEITH SYMPOSIUM®

TECHNIQUE-RETROPERITONEAL

Important aspects of the operation's technique

Intestine retraction

With the use of abdominal pads intestines are retracted cephally and medially to visualize the aorta bifurcation

Vessel Loops

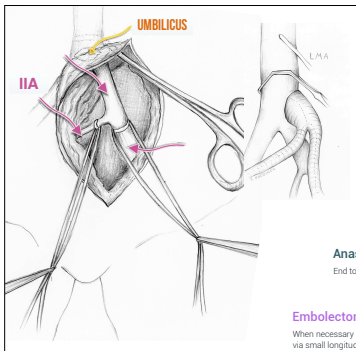
Vessel loops are placed on EIA IIA and opposite CIA

Aorta separation

Posterior layer of peritoneum is separated from aorta as high as possible (usually to the level of IMA) and aorta is separated from VCI to enable clamping

Clamping

Clamping on aorta must be done as high as possible with Satinsky (additional vessel loop is placed on aorta for secure)



OPERATION

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TECHNIQUE-RETROPERITONEAL

Important aspects of the operation's technique

Artery Presentation

Pulling the IIA and EIA loops down and to the opposite side (30 degree angle) reveals the level of aorta bifurcation

Aorta incisione

About 15mm longitudinal incisione at the level of bifurcation is performed

Anastomosis

End to side anastomosis with 3.0 Prolene is made

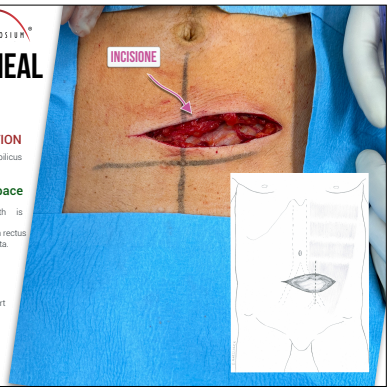
Embolectomy or endartherectomy

When necessary embolectomy or endartherectomy is made via small longitudinal incision over prosthesis

OPERATION

TECHNIQUE-RETROPERITONEAL

Important aspects of the operation's technique



NEW OPTION

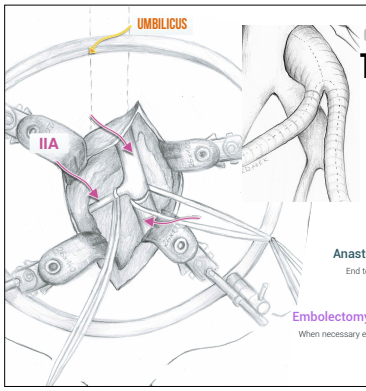
Transverse incision just 2 cm below umbilicus

Different access to the retroperitoneal space

Lamina anterior of the rectus abdominis muscle sheath is vertically incised.
Reaching the retroperitoneal space by entering between rectus abdominis and lamina posterior below linea arcuata.

Better visualization of distal portion of CIA

This access gives better insight to the IIA distal portion of CIA, and proximal part of EIA



OPERATION

TECHNIQUE-RETROPERITONEAL

Important aspects of the operation's technique

NEW Artery Presentation

In this NEW technique (taken from neurosergical **ALIF** operation) we get good access to distal CIA.

NEW Artery Presentation

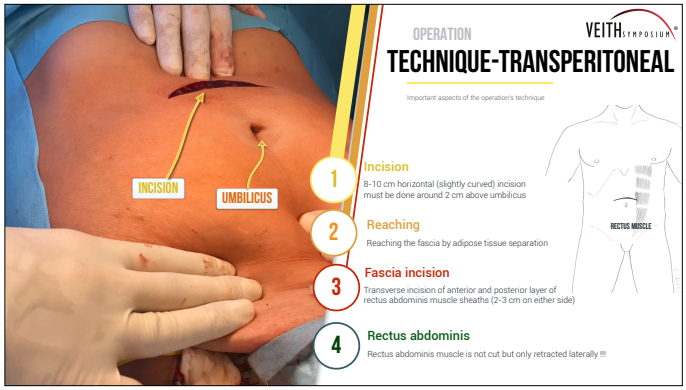
This option gives clear access to CIA/EIA/IIA bifurcation

Anastomosis

End to side anastomosis with 3.0 Prolene can be easily performed

Embolectomy or endartherectomy

When necessary embolectomy or endartherectomy can be easily made.



OPERATION

TECHNIQUE-TRANSPERITONEAL

Important aspects of the operation's technique

1 **Incision**

8-10 cm horizontal (slightly curved) incision must be done around 2 cm above umbilicus

2 **Reaching**

Reaching the fascia by adipose tissue separation

3 **Fascia incision**

Transverse incision of anterior and posterior layer of rectus abdominis muscle sheaths (2-3 cm on either side)

4 **Rectus abdominis**

Rectus abdominis muscle is not cut but only retracted laterally

OPERATION

TECHNIQUE-TRANSPERITONEAL

Important aspects of the operation's technique

Intestine retraction

With the use of abdominal pads intestines are retracted cephally and right side laterally to visualize the aorta

5

Aorta separation

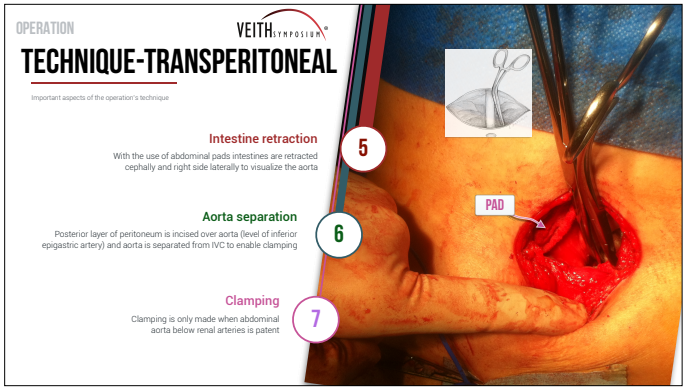
Posterior layer of peritoneum is incised over aorta (level of inferior epigastric artery) and aorta is separated from IVC to enable clamping

6

Clamping

Clamping is only made when abdominal aorta below renal arteries is patent

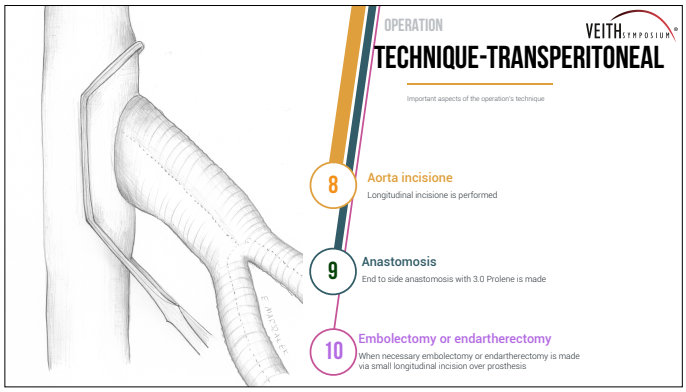
7



OPERATION

TECHNIQUE-TRANSPERITONEAL

Important aspects of the operation's technique



8 **Aorta incisione**

Longitudinal incisione is performed

9 **Anastomosis**

End to side anastomosis with 3.0 Prolene is made

10 **Embolectomy or endartherectomy**

When necessary embolectomy or endartherectomy is made via small longitudinal incision over prosthesis

OPERATION

TECHNIQUE-RETRO -TRANSPERITONEAL

Important aspects of the operation's technique

Tunelling

Canalization for prosthesis' arms is made remotely using index fingers, pushing them over surface of iliac arteries

11

Graft transposition

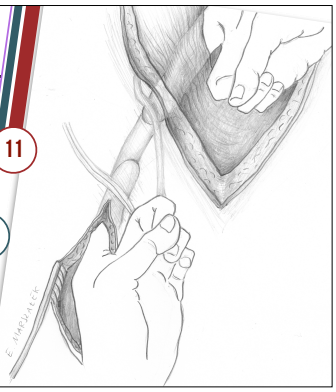
Prosthesis arm attached to the thread is pulled through previously prepared tunnel

12

Anastomosis

End to side anastomosis to CFA with 5.0 Prolene

13



OPERATION

TECHNIQUE-TRANSPERITONEAL

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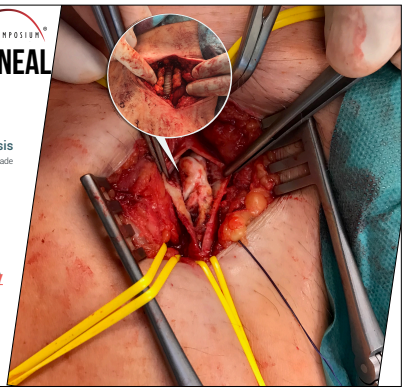
Important aspects of the operation's technique

Anastomosis

End to side distal anastomosis with 5.0 Prolene is made

ALL ANASTOMOSIS ARE PERFORMED WITH ARTERY ELEVATED

we use extensibility of the artery



TECHNIQUE ADVANTAGES

Minimal Incision For Retroperitoneal / Aorto-Bifemoral Bypass

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- In retroperitoneal /aorto-bifemoral bypass the abdominal breathing is not impaired
- Limited postoperative gastrointestinal atony
- Patient is discharged home on 2nd (usually)-3rd day what reduces costs and risk of hospital acquired wound infection
- Limited dermal paresthesia occurs
- Good cosmetic effect

IN OUR EXPIRIENCE ONE ILIAC VEIN COLISION SAFELY FIXED

TECHNIQUE CONTRAINDICATIONS (RELATIVE)

Minimal Incision For Retroperitoneal / Aorto-Bifemoral Bypass

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- Distal aorta total occlusion /RELATIVE/
  Remote endarterecomy/embolectomy connected with high risk of renal embolization
- Previous operation in retroperitoneal/upper abdomen
- Horseshoe kidney (one attempt with conversion in my expirienc
- Previous radiotherapy
- Previous stenting in aorta bifurcation /RELATIVE/

IN OUR EXPIRIENCE ONE RENAL ARTERY EMBOLISATION DUE TO EMBOLECTOMY ATTEMPT

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CUT OR NOT TO CUT

OPERATION

TECHNIQUE

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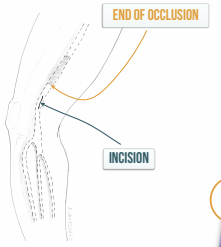
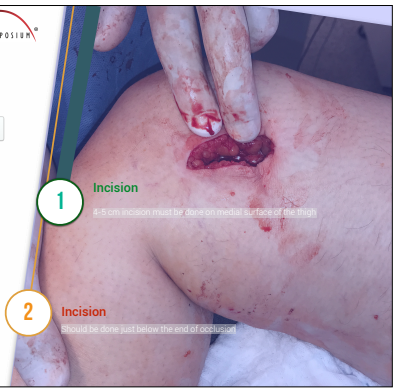
Important aspects of the operation's technique





OPERATION

TECHNIQUE

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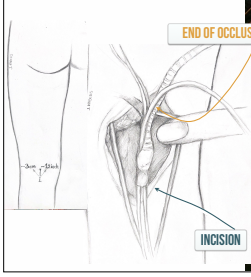
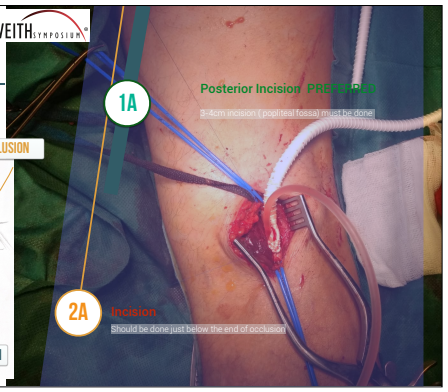
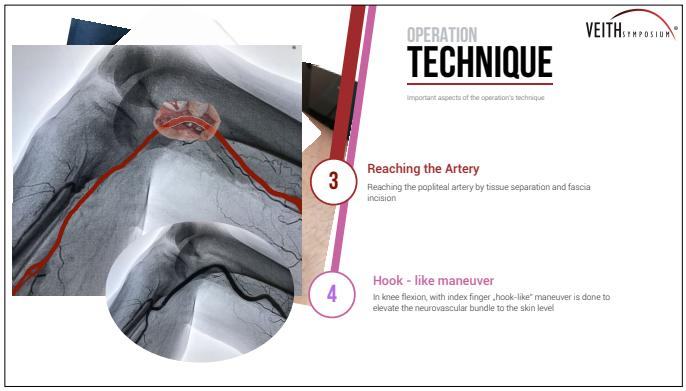
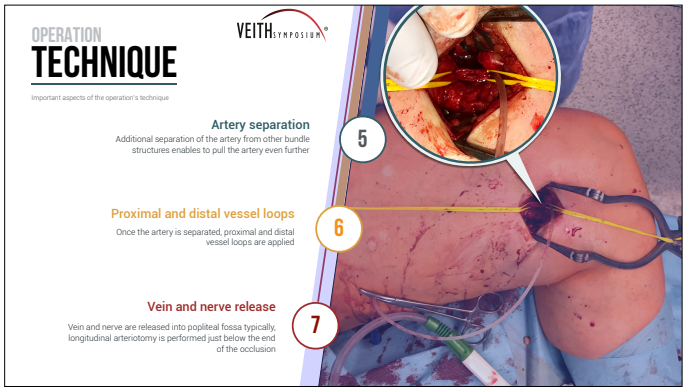
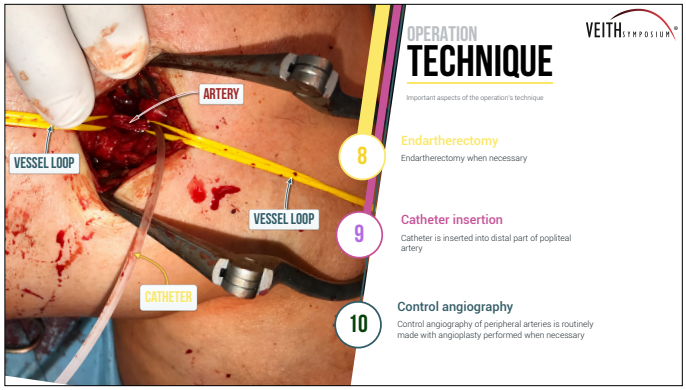
Important aspects of the operation's technique

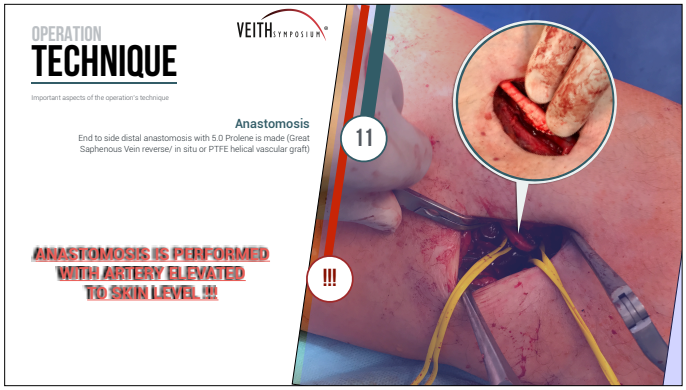


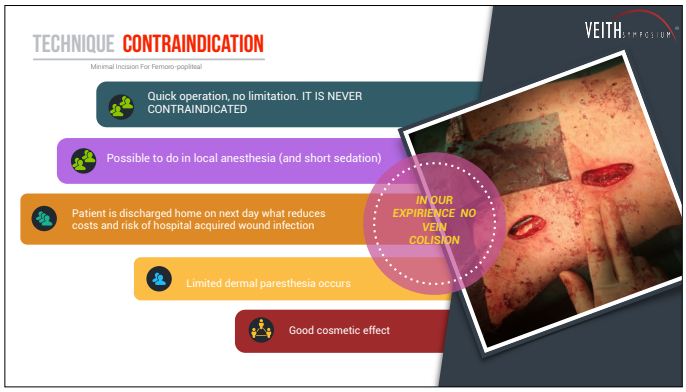


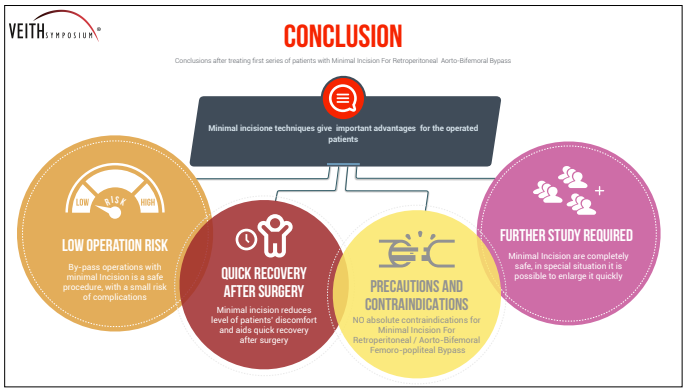

OPERATION
TECHNIQUE
Important aspects of the operation's technique
3
Reaching the Artery
Reaching the popliteal artery by tissue separation and fascia incision
4
Hook - like maneuver
In knee flexion, with index finger „hook-like" maneuver is done to elevate the neurovascular bundle to the skin level


OPERATION
TECHNIQUE
Important aspects of the operation's technique
Artery separation
Additional separation of the artery from other bundle structures enables to pull the artery even further
5
Proximal and distal vessel loops
Once the artery is separated, proximal and distal vessel loops are applied
6
Vein and nerve release
Vein and nerve are released into popliteal fossa typically, longitudinal arteriotomy is performed just below the end of the occlusion
7


ARTERY
VESSEL LOOP
VESSEL LOOP
CATHETER
OPERATION
TECHNIQUE
Important aspects of the operation's technique
8
Endartherectomy
Endartherectomy when necessary
9
Catheter insertion
Catheter is inserted into distal part of popliteal artery
10
Control angiography
Control angiography of peripheral arteries is routinely made with angioplasty performed when necessary


OPERATION
TECHNIQUE
Important aspects of the operation's technique
Anastomosis
End to side distal anastomosis with 5.0 Prolene is made (Great Saphenous Vein reverse/ in situ or PTFE helical vascular graft)
11
ANASTOMOSIS IS PERFORMED WITH ARTERY ELEVATED TO SKIN LEVEL !!!
!!!


TECHNIQUE CONTRAINDICATION
Minimal Incision For Femoro-popliteal
Quick operation, no limitation. IT IS NEVER CONTRAINDICATED
Possible to do in local anesthesia (and short sedation)
Patient is discharged home on next day what reduces costs and risk of hospital acquired wound infection
IN OUR EXPIRIENCE NO VEIN COLISION
Limited dermal paresthesia occurs
Good cosmetic effect


CONCLUSION
Conclusions after treating first series of patients with Minimal Incision For Retroperitoneal Aorto-Bifemoral Bypass
Minimal incisione techniques give important advantages for the operated patients
LOW
HIGH
LOW OPERATION RISK
By-pass operations with minimal Incision is a safe procedure, with a small risk of complications
QUICK RECOVERY AFTER SURGERY
Minimal incision reduces level of patients' discomfort and aids quick recovery after surgery
PRECAUTIONS AND CONTRAINDICATIONS
NO absolute contraindications for Minimal Incision For Retroperitoneal / Aorto-Bifemoral Femoro-popliteal Bypass
FURTHER STUDY REQUIRED
Minimal Incision are completely safe, in special situation it is possible to enlarge it quickly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ANOTHER MINIMAL INCISION
MICE – Minimal Incision Carotid Endarterectomy – What would You like to do ?
SCARE LENGTH
Scare Length
SAME PATIENT
SCARE LENGTH MICE


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THANK YOU FOR YOUR TIME
Presented technique and data soon to be published
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Many thanks to my colleagues
Ewa Marszałek, Ilona Kabelis, Janusz Machałowski, Stanisław Mazur, Rafał Górski, Jakub Mocarski
LMA