Blood saving surgical techniques

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Blood saving surgical techniques
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We work at the place where other people spend their holidays
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Topics not discussed:

• Protamin
• Strategies for Tc dysfunctions
• Strategies for correcting coagulopathies
• Statistics
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Surgical Strategies

Paradigm Shift
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From Speed....

„I find I‘m luckier when I work harder.“

Denton Cooley
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To

Perfection
Surgical Strategies:

Procedure planning

• On pump/off pump? *Useful/mandatory/better not*

• Minimal access or classic open surgery
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**Surgical Strategies:**

**Classical example:**
LIMA- RIVA Redo

- Off pump
- Minimal dissection
- and exposure of the heart
Surgical Strategies: coagulation or clipping?
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Surgical Strategies:

Pump → Minimize priming volume

- Reduce tube diameter & length
- Oxygenator size
- Retrograde autologous priming
- Autologous blood donation
- Cell Saver
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Surgical Techniques:
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Surgical Techniques:

Perpendicular stitches
Surgical Techniques:

Perpendicular stitches
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Surgical Materials:

- Selection of suture line
- Wire-
- Woven
- vs. monofilament
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Surgical Materials:

...and what about Glue ??
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- Tissucol®
- Floseal®
- Arista®
- ProGel®
- Vivostat®
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Tissuclol®
Arista®
ProGel®
Vivoset®

*proseal®*
Control of Hemostasis:

• Compression
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Control of Hemostasis:

• Matter for the boss!
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Control of Hemostasis:

• Stay **systematic**

• Use gauze for compression

• and as a bleeding **indicator**
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Summary

• Blood saving starts during Operation planning

• In any case before the first cut

• Blood loss during/after open heart surgery is not a „Gentleman‘s Delict“
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Summary

• Remember good old surgical techniques

• Surgical haemostasis is a top priority affair and has to be carefully taught as any other surgical part of the procedure
Thank You!