

## Anticoagulation therapy & monitoring during artificial instrumentation (IABP, LVAD, ECMO)

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The aims of this lecture are to review mechanisms and management of bleeding and thrombosis related to circulatory assist devices.

Modern technological advances made circulatory assist devices widely available to surgical patients with acute or chronic heart failure. Exposure of blood to extracorporeal material elicits varied levels of pro-inflammatory and pro-coagulant responses depending on the type of instrument. In the early postoperative period, bleeding is often a major problem, while thrombosis is most feared for chronic instrumentation of devices. The intensity of anticoagulation varies according to the underlying disease state, stage of procedure, type of device, and duration of circulatory support.

It is extremely difficult to evaluate in vivo coagulation state, but understanding various laboratory coagulation tests is important to detect potentially serious haemorrhagic or thrombotic complications related to circulatory assist devices.

### References

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