Anti-coagulation and mechanical heart valves

Mechanical mitral valves are at risk of thrombosis when not anticoagulated, and at highest risk of embolus, and thus need high levels of anticoagulation. Tissue valves can be considered to have the same embolic risk as a patient with native valve but atrial fibrillation etc.

Question: What is the best strategy for bridging anticoagulation?

- There are no definitive evidence-based guidelines. Warfarin is better thromboprophylaxis than heparins. Admission for four-five days of IV heparin infusion is an accepted strategy, but can be problematic getting the level right, and the appropriate level is presumed to be different for each patient. Thus heparin infusion may be less effective than therapeutic subcutaneous Clexane (>1mg/kg bd). If bd Clexane is used, the 24 hours prior to surgery will require shorter-acting anticoagulation (i.e. Heparin). Intravenous Heparin infusion will need to be used until four hours preoperatively. 'Acute' reversal with preoperative Prothrombin Complex Concentrate may also be an option. Check INR and APTT preoperatively. ICU/HDU postoperatively.

- Plan needs to be discussed and agreed in advance with surgeon, including regarding postoperative heparin and warfarin as soon as possible.

- Prior to surgery, there must be clarification of the cardiologist responsible for the patient throughout inpatient period. This needs to be clearly documented in patient records. Prior to surgery there should be proactive notification of the cardiologist who will be involved.