

Non-conventional bypass systems – Teamwork

John Mulholland

Lead Clinical Perfusionist, Department of Clinical Perfusion Science, Essex Cardiothoracic Centre, UK; Honorary Member, Department of Clinical Perfusion Research, Imperial College Health Science Centre, London, UK

Sometimes the true benefit or underlying strength of a new technique extends beyond just the technology itself. This is typified with the use of non-conventional artificial heart and lung support. Conventional Cardiopulmonary Bypass (CPB) is like a vintage motor-bike, a basic engine with its limitations widely accepted. Successfully introducing and optimizing any new medical technique benefits from teamwork. This is especially important when it involves something as fundamental to cardiac surgery as CPB.

The term 'non-conventional bypass' (NCB) does not just refer to the mini systems that have evolved over the last 8 years. World market sales figures provide a global opinion of what constitutes conventional CPB. Taking this into account, a starting definition for NCB involves a closed system and a focus on reduced prime volumes. Very unscientifically the importance of teamwork with regards to NCB is directly proportional to the distance

you move away from conventional CPB.

It is important to understand that the teamwork involved in NCB does not begin and end in the 'rugby scrum' that is the cardiac operating theatre. Sadly for all of us it starts in the classroom and involves system selection and planning as a cohesive team. Moving from vintage combustion to computer engine control units requires a multidisciplinary understanding. The anaesthetist and surgeon may not want to know exactly how the engine works, but it could come in handy. On the other hand the Perfusionist may not want to give up the 'dark arts' of non-conventional artificial heart and lung support too easily. However, good teamwork always involves some sacrifice, when necessary, from all parties. The presentation will focus on the essentials for the Anaesthetic playmaker keen to be involved in "Dark Arts" of Non-conventional Bypass. These are summarized in figure 1.

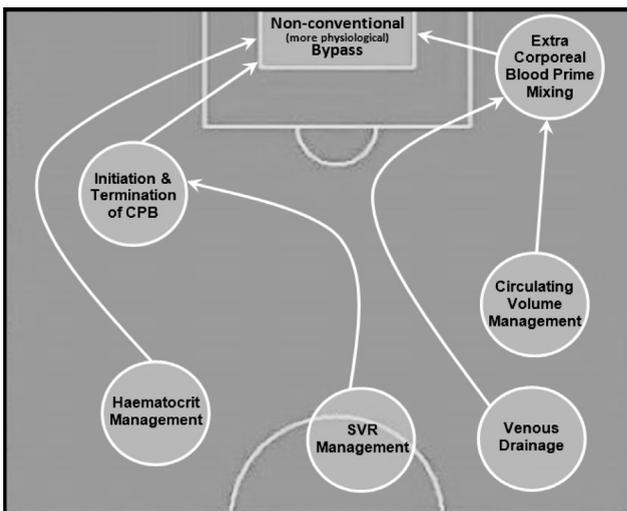


Figure 1