

Preoperative work-up of the HIV vascular patient - have the goalposts moved?

Traditionally the work-up of vascular patients is based on clinical and operative predictors, and the functional capacity of the patient. The major clinical predictors include unstable coronary syndromes, heart failure, severe valvular disease and significant arrhythmias, whereas stable angina and diabetes are considered intermediate clinical predictors.¹ No mention is made even in the minor clinical predictors of HIV and Aids. Yet more and more patients on our vascular slates present with vascular disease related to HIV and Aids.

The spectrum of vascular disorders in HIV/Aids is different from patients with atherosclerotic disease.² It would appear that most vascular disorders in the HIV/Aids patient are the result of an alteration in vascular endothelial function. This causes both aneurysmal and occlusive disease, which may manifest in large, medium and small-sized vessels, commonly in atypical sites. Thus these patients often present for surgery, ranging from aneurysm repair to amputation of limbs or digits.

The important question we need to answer is "can one apply the accepted vascular work-up algorithms to these patients?"

In order to answer this question we need to profile the HIV/Aids vascular patient. They are often young (4th decade) and appear relatively "fit" in terms of ASA status. There is abundant evidence in the literature that patients on HAART (highly active anti-retroviral therapy) have a higher incidence of coronary artery disease, due to the side effects of hyperlipidaemia and insulin resistance, particularly with the protease inhibitors. In addition, these drugs exacerbate endothelial dysfunction, with an increase in cardiovascular events with worsening of multiple coronary artery disease risk factors.³ Does this also apply to the young HIV vascular patient who has never taken antiretrovirals? This question is open to much debate and conjecture in the literature.

Other important aspects of HIV infection that are relevant to anaesthesia include hypercoagulability, which is usually as a

result of anticardiolipin antibodies, protein-S deficiency and/or antithrombin deficiency.⁴

Does the type of planned surgery in the HIV/Aids vascular patient have any bearing on the extent of the preoperative workup? Van Marle et al⁵ have proposed the following regimen in these patients, based on the patient's CD4 count: CD4 > 500, patient undergoes conventional surgery; CD4 of 200 – 500, patient has a conservative alternative to conventional surgery; CD4, <200, palliative and life-saving surgery only. Can this be applied to all HIV vascular patients, bearing in mind that all types of medical practice are subject to similar resource constraints?

Thus, when faced with the "typical" HIV vascular patient who often presents as a young, coagulopathic patient with aneurysmal or occlusive disease, the latter often manifesting with severe symptoms, should we apply our traditional vascular work-up algorithm? This may well depend on whether the patient has been on HAART, and the extent of the proposed surgery. The scope for research in this area is enormous.

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References

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