

Robotic Radical Prostatectomy, Daycase Surgery and Cardiac Assessment- Pandora's Box

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Dear Sir,

I am writing this letter from a trainee viewpoint. Very often, it is easy for trainees to become misled into believing robotic surgery is safe for all patient types. The purpose of this letter is to highlight patient safety awareness to complications that may occur in cardiac patients requiring minimally invasive prostatectomy.

Robotic and laparoscopic prostatectomy has developed over the past years to become the gold standard of care for patients with prostate cancer. Very often, due to this rapid development in minimally invasive surgery, patients with significantly more co-morbidities are operated on, including cardiac conditions. This is also related to a larger more aging population. As a result, more patients are being operated on, very often as daycases [1].

New cardiology guidelines recommend continuous antiplatelet therapy for some patients with cardiac stents [2]. Aspirin use, is usually a contraindication prior to major surgery as a result, however in cardiac patients, this is not the case [3]. However, more recently, perioperative aspirin show no increased blood loss, operative time, transfusion requirement, hospital stay or operative complications [4]. To make matters more complicated, anticoagulants such as rivaroxaban are now being used [5]. This is both a significant development for the patient and also for the prostatectomist.

Robotic prostatectomy provides a prolonged Trendelenburg position of about 40degree and CO₂ pneumoperitoneum for surgical exposure with potential significant changes in hemodynamic and respiratory parameters. It was previously thought this contributed to risk of MI during robotic prostatectomy [6]. However, more recently it has been found pneumoperitoneum and head-down position increase filling pressures, without any clinical effect on cardiac performance [7]. Yet, these patients are more likely to benefit from cardiopulmonary exercise testing beforehand.

Venous Thromboembolism (VTE) is a preventable condition that can be exacerbated by surgery in patients with pre-existing risk factors. The incidence of VTE varies from 1-5% among men with prostate cancer undergoing open prostatectomy [8]. However, recently this has been found to be much lower at 0.8% in robotic prostatectomies [8]. This gives a clear significant advantage of robotic prostatectomy over open prostatectomy,

where the risk is far higher. However, patients with risk factors should not be part of a daycase surgery programme.

The most important lesson, is appropriate patient selection beforehand with cardiopulmonary exercise testing as part of the assessment and appropriate aftercare. Patients with an ASA of 3 or greater, poor performance status or significant cardiac co-morbidity should not be operated on as a daycase procedure.

With kind regards

Goonewardene SS

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