PE79

Prospective propensity matched non randomised comparison between open and robotic assisted kidney transplantation

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Introduction & Objectives: Open renal transplant (OKT) is a well established procedure. Introduction of robotic platform generated interest in minimally invasive renal transplant (RAKT). This study was carried out between April 2016 and Jan 2019. 63 Robotic assisted and 293 Open kidney transplants were performed during this period.

Materials & Methods: All eligible patients were explained about both the transplant modalities. Patients were divided into two groups based on their preferences. Grafts with more than two arteries were excluded. Data prospectively maintained and analysed using R software. Descriptive analysis done using chi square/ t test equality of means.

Results: Perioperative analgesia requirement was significantly less in RAKT group. Rewarm ischaemia time was significantly longer in RAKT group. Tacrolimus levels at day 2 were significantly higher in RAKT group.Serum creatinine in RAKT group was significantly higher at day 7 and day 30 but was comparable at day 90. None of the complications directly attributable to Robotics were seen.

Conclusions: RAKT is a promising minimal;y invasive modality for renal transplant. Very useful in obese patients and cosmetic advantage in females and children. Tacrolimus dosage should be redefined for RAKT. Short term results are non inferior to OKT with comparable functional outcomes. Long term follow up is required before firmly establishing RAKT in renal transplantation.