Comparing the Learning Curves of the "Trainer Hospital" (Basel University Hospital, Basel, Switzerland) vs. the "Trainee Hospital" (Stellenbosch University, Tygerberg Hospital, South Africa) in Retroperitoneoscopic Live Donor Nephrectomy

Introduction and Objective: Minimal access donor nephrectomy is not easy to perform and guidance as well as adequate laparoscopic experience is needed to change from open donor nephrectomy to minimal access donor nephrectomy via either the retro- or transperitoneal route. We at Stellenbosch University met in 2008 with the Basel group and adapted their technique of minimal access renal donor surgery. We compare the learning curves of both institutions operating in very different circumstances.
Materials and Methods: The first 48 cases in each series were compared. The data in each series were collected prospectively. Compared variables included sex, side of donation, BMI, operative time, warm ischemic time, blood lost, conversion to open, re-operation, hospital stay, complications and deaths. Statistical analysis was performed using Graphpad Instat software. Fisher's exact test for contingency tables and unpaired t-test for comparing means were used. A p-value less than 0.05 were considered significant.
Results: More females were donating in Basel (31) and more males in Tygerberg (26). More right-sided kidneys were removed at Tygerberg (22 vs. 16). BMI, surgical time and blood lost and graft function did not differ significantly. Warm ischemic times were significantly shorter in Basel ($p < 0.001$). Two conversions to open surgery took place in the Basel group. One patient was re-operated in Basel for chylothorax. Neither unit's patients needed blood transfusions. Hospital stay was significantly shorter in the Tygerberg group (3.2 vs. 10.4 days $p < 0.001$). No deaths occurred in either group.
Conclusion: Retroperitoneoscopic donor nephrectomy appears a safe technique to teach from a first world country to an African country. Comparing both learning curves varied very little. No clinical significant differences were identified.