A safe indocyanine green dye (ICG) injection into the ureters (EP Method) in 3D-laparoscopic complex gynaecologic surgery

Sharifah Halimah Ja’afar1, Tan Ee Ping2, Sufian Hady3, Alex Mathews4

1Department of Obstetrics & Gynaecology, Gleneagles Hospital Medini Johor, Malaysia, 2Department of Obstetrics & Gynaecology, PJ Integrated Advanced Surgery & Oncology (PiCASO), Malaysia, 3Department of Obstetrics & Gynaecology, Pantai Batu Pahat Hospital, 4Department of Obstetrics & Gynaecology, Gleneagles Hospital Kuala Lumpur

ABSTRACT
Introduction: We aimed to showcase the safety & feasibility of a simplified ICG injection into the ureters by the gynaecologist using an epidural catheter (EP Method) as an alternative to conventional ureteric stenting. Methods: Prospective analysis of the first 15 case series of simplified ICG injection into the ureter laparoscopic complex gynaecological procedures operated from Oct 2022-April 2023. A cystoscopy was done to identify the ureteric opening, an epidural catheter was introduced into the bladder through the cystoscope and advanced into the ureteric orifices up to about 15 cm mark from the ureteric opening. Approximately 2-4 ml of ICG was injected from the distal end of the catheter into each of the ureters, respectively, and the catheter was withdrawn completely under direct vision. The laparoscopic gynaecologic procedures were carried out according to the plan. Result: Preliminary results showed that out of 15 complex cases, 10 were endometriomas with deeply infiltrating endometriosis, 7 were frozen pelvis, and 5 were complicated uterine fibroid. The mean age of the patient was 41.6 years, with a mean BMI of 23.6. The mean duration of surgery is 132 mins, and the mean Estimated blood loss (EBL) is 158 ml. Almost 99% of the ICG injection into the ureter was done by the operating gynaecologist. There were no immediate or latent adverse outcomes recorded in all the cases. Conclusion: Our preliminary data supported that the simplified ICG injection into the ureter using an epidural catheter via cystoscope by the gynaecologist is safe and not associated with any adverse outcome.