

THE USE OF AN INTRAPERITONEAL LAPAROSCOPIC CLEANING DEVICE TO ENHANCE OPERATIVE VISIBILITY DURING LAPAROSCOPIC DONOR NEPHRECTOMY

Jonathan Ellis, Melanie Field, Ahmed Hamsho, Nicholas Inston, Steve Mellor, Andrew Ready
 Queen Elizabeth Hospital Birmingham, United Kingdom

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4646793

Introduction

The safety of laparoscopic donor nephrectomy (LDN) is dependent on intra-operative visibility. Even so, visibility is often impaired by contamination of the laparoscope lens, requiring scope removal for cleaning. This can occur repeatedly, interrupting the progress of dissection, and potentially compromising safety. In response to this problem, we present a series of LDNs performed using the OpClear® laparoscopic cleaning system.

Attaching to the laparoscope, the OpClear shields the lens from contamination via intelligent CO₂ flow. It also delivers on-demand lens washes (via foot pedal) to remove blood or other tissue particles, maintaining continuous vision without scope removal.



Objectives

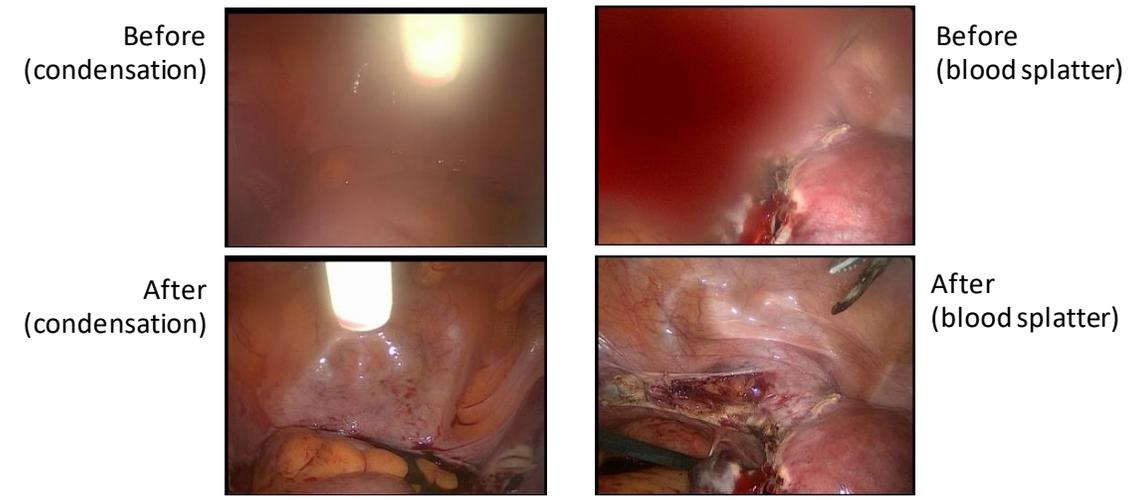
To assess the viability and efficiency benefits of the OpClear laparoscopic cleaning device.

Methods

Between August 2017 and June 2019, 84 patients, underwent hand-assisted laparoscopic donor nephrectomy (HALDN) using the OpClear. Inclusion was by chronological presentation. Intra-operative OpClear usage was recorded by the device hard-drive. Each wash episode represented a point otherwise requiring scope removal. Additional outcomes were recorded prospectively.

Results

84 patients (Male to Female ratio = 44:40; Mean age 48yrs (24-74); Mean BMI 27.3 (18.9-34.8); Left-sided nephrectomy = 81) underwent HALDN, by 5 surgeons, including 1 trainee. The mean duration of operation was 108 mins (range 47-199) while the mean number of recorded OpClear scope washes per case was 14.78 (range = 1-78). All cases were completed successfully, and there were no open conversions or OpClear-related adverse events.



Conclusions

In this series of HALDNs, the OpClear system provided effective intra-abdominal lens clearing, avoiding some 15 scope removals per case, along with the disruption to operative progress. In complex cases, the impact was even greater. In all cases, excellent visibility was maintained, notably during critical stages, e.g. vascular divisions. The OpClear system proved safe with no effect observed from the additional insufflation produced. The system is well-accepted by theatre staff, provides excellent support for surgical training and is now a standard in our HALDN protocol.