

## DIRECT PERITONEAL RESUSCITATION IN PERITONITIS – TIME TO TAKE NOTE – TECHNICAL OPTIONS

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**Introduction:** In emergency general surgery (EGS) patients with peritonitis mortality remains C 10%. Direct peritoneal resuscitation (DPR) involving instillation of peritoneal dialysis fluid in trauma patients has improved their mortality by 10% in RCTs. Its use in EGS peritonitis has not been reported. This study reports its use and novel technical options for DPR in patients with advanced peritonitis.

**Material & Methods:** An ethically approved evaluation using postoperative intraperitoneal (300 mL/hr, 2.5% glucose solution) instillation in 3 moribund patients in septic shock undergoing surgery for peritonitis with an open abdomen was undertaken at Letterkenny University Hospital in 2018.

**Results:** 3 patients (mean age 80, range 70-88), 2 females with mesenteric ischemia, and 1 male with faeculent peritonitis post anastomotic leak, underwent bowel resection, septic source control and open abdomens. DPR was combined with negative pressure AbThera via a Robinson catheter in 2, and AbThera Ultra flow in 1. The patients mean Apache 2 score was 22 (range 18-26), mean SOFA score 11 (range 9-13), and mean POSSUM score predicted mortality of 73.8%. All survived [30 days, mean ICU LOS of 18 days, with an average of 3 surgeries to final successful uncomplicated fascial and skin closure in all 3. A mean infusion volume of 3450 mL/day (range 2400 mL-4800 mL/day). Both infusion methods worked well.

**Conclusions:** This study has identified the successful implementation of two techniques of DPR in patients with advanced peritonitis and open abdomen. There is greater potential use of this well proven technique in trauma in selected septic shock patients with peritonitis in EGS.

**References:**

Smith JW, Matheson PJ, Franklin GA, Harbrecht BG, Richardson JD, Garrison RN, Randomized Control Trial Evaluating the Efficacy of Peritoneal Resuscitation in the Management of Trauma Patients Undergoing Damage Control Surgery, *Journal of the American College of Surgeons* (2017).