

Secondary abdominal compartment syndrome recognised in the operating room following stent for infected obstructed kidney

A differential to remember

[Dr Brian Ng Hung Shin, Dr Christopher Tracey; Gold Coast University Hospital](#)

INTRODUCTION

Secondary abdominal compartment syndrome [ACS] is defined as the presence of the presence of new organ dysfunction with concurrent acute intra-abdominal hypertension in a context lacking a primary Intra-peritoneal pathology. Secondary ACS following urosepsis is very rare. We present a case of secondary ACS in a patient post ureteric stenting for infect obstructed kidney and reviewed the literature to identify potential modifying factors.

METHODS

Medical records were accessed and a systematic literature search using Pubmed, Embase, and Cochrane was performed from inception to 2021 with no language restriction.

RESULTS

A 65 year old male, presented with Escherichia-Coli urosepsis due to a left infected obstructed kidney from a distal ureteric stone and an acute kidney injury. Post ureteric decompression by a stent, he was admitted to ICU due to failed extubation in the setting of persisting hypoxia and lactaemia. Sixteen hours post, he was noted to have an increasingly distended abdomen, hypotension refractory to vasopressors, anuric renal failure, and worsening lactaemia. Decision was made for an exploratory laparotomy. Following a midline incision, a sudden & unexpected improvement in haemodynamics and ventilation was noted consistent with abdominal compartment syndrome. The abdomen was remarkable for a thickened and oedematous small bowels and mesentery thought to be due to fluid resuscitation in the setting of sepsis. The patient subsequently made a slow progressive recovery and was discharged home after a 3 months length of stay.

CONCLUSION

Secondary ACS following urosepsis is an important differential that urologists need to bear in mind in a deteriorating patient. At risk patients include obese patients, those with acidosis (pH < 7.2) and septic patients who had aggressive crystalloid resuscitation [> 5L/24 hours] with vasopressor support. On presentation, cautious fluid resuscitation can potentially avoid ACS in those at risk, and if recognised early, a trial of medical management may preclude the need for surgical decompression.