Royal Manchester Children's Hospital

Manchester University NHS Foundation Trust

AnaConDa at RMCH – Indications for future practice

Natalie Fowler Critical Care Scientist

Claire Jennings, Research Nurse

Rebecca Marshall, Research Nurse

Stephen Playfor, PICU Consultant

Lara Bunni Research Fellow

Background

The development of the Anaesthetic Conservation Device, AnaConDa, has facilitated the delivery of volatile agents in an ICU setting, via standard mechanical ventilators without the need for active gas scavenging. Since 2006, Royal Manchester Children's Hospital have used isoflurane via the AnaConDa for sedation on PICU.

The aim was to identify key aspects in the care and delivery of sedation via the AnaConDa to explore areas for future work.

Methods

A retrospective review of all patients who had received sedation via the AnaConDa was undertaken, collecting data from medical notes and electronic records from June 2006 to December 2019. Data collected included demographics, indication for use, time to commence treatment, efficacy and complications.

Conclusions

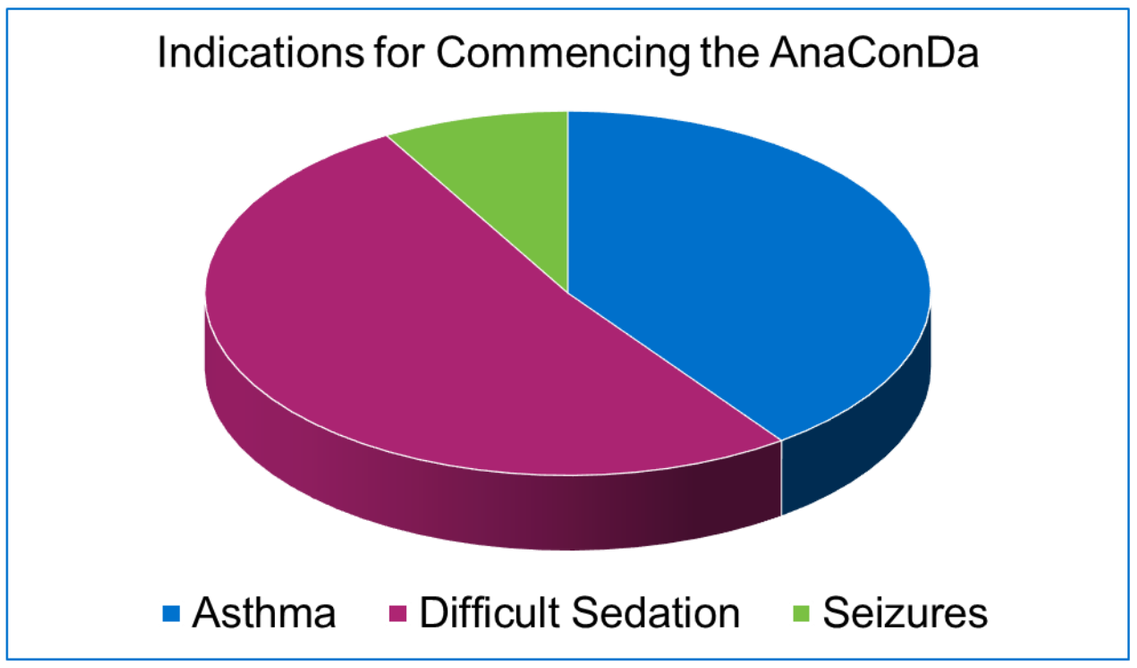
The retrospective review provided an opportunity to thoroughly examine our practice and highlighted its effective use in treatment for patients presenting with status asthmaticus.

However, the data highlighted that patients with increasing sedative requirements were considered much later to start on the AnaConDa system.

Further investigation into the decision-making and indication for commencing therapy may support a more effective sedation method, ultimately improving patient care and outcome

Results

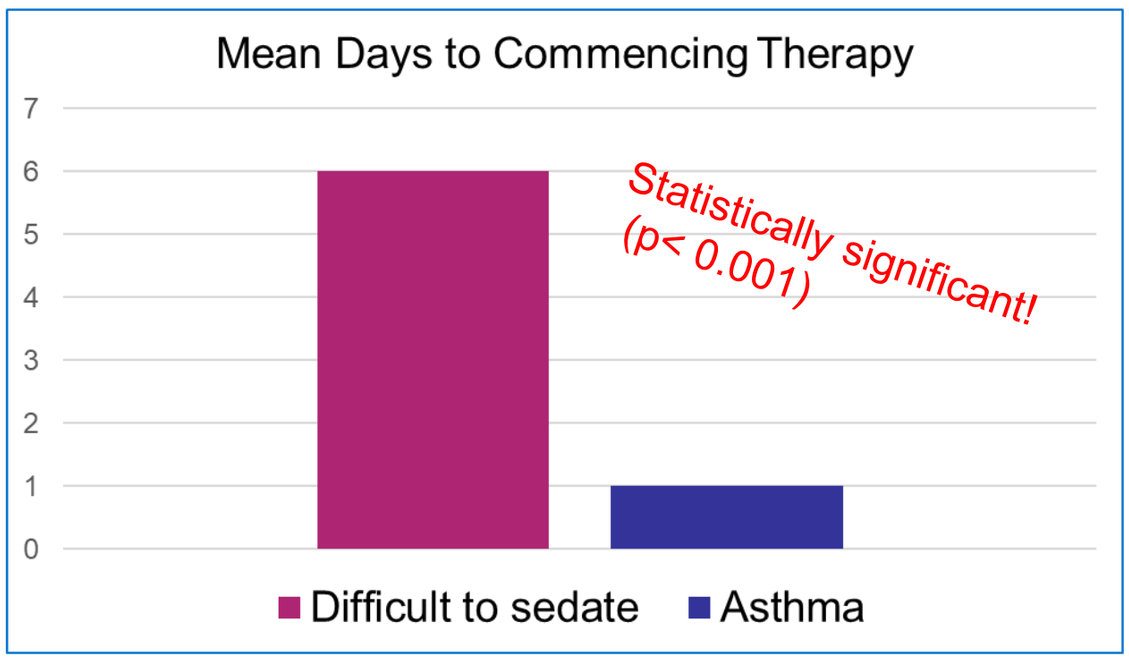
Of 93 patients, full documentation on the use of the AnaConDa for 60 patients was available and included in the review



The most common complication was hypotension (16.4%)

Mean time to commence delivery = 4 days

Mean total delivery time = 55.1 hours



47.5% of patients were able to wean other sedative agents and 76% of patients with asthma saw a reduction in positive inspiratory pressure.

References

Sackey PV, Martling C, Radell PJR, Three cases of PICU sedation delivered by the 'AnaConDa®'. Pediatric Anaesthesia 2005: 15: 879-885

Soukup J, Sharrf K, Kubosch K et al: State of the art: Sedation concepts with volatile anaesthetics in critically ill patients. Journal of critical care 2009: 24: 535-544