

# Ketamine and atropine decrease pain for preterm newborn tracheal intubation in the delivery room: an observational pilot study.

[Acta Paediatr.](#) 2013 Dec;102(12):e534-8. doi: 10.1111/apa.12413.

[Barois J<sup>1</sup>](#), [Tourneux P.](#)  
**[Author information](#)**

## Abstract

### AIM:

Various analgesic strategies are used before tracheal intubation of preterm newborns in the delivery room, due to the lack of a standard protocol and difficult venous access. This study evaluated the feasibility and efficacy of short venous catheter insertion and immediate ketamine analgesia for tracheal intubation of preterm newborns at birth in the delivery room.

### METHODS:

Prospective observational pilot study, with ketamine and atropine used at the paediatrician's discretion. Pain score, heart rate, SpO<sub>2</sub> nadirs, procedure duration and neonatal intensive care unit morbidity were recorded.

### RESULTS:

Fifty-seven consecutive preterm newborns were included between January 1 and June 30, 2012: 15 in the no analgesia group and 39 in the intravenous ketamine group. Short catheter insertion failed in three newborns. The pain score was lower during laryngoscopy in the ketamine group ( $4 \pm 0.7$  vs.  $2.9 \pm 3.2$  in the no analgesia group,  $p < 0.001$ ). The heart rate nadir during tracheal intubation was  $150.7 \pm 29.6$  bpm (vs.  $112.6 \pm 35.5$  bpm in the no analgesia group,  $p < 0.01$ ). Surfactant therapy was administered to 79.5% of newborns in the ketamine group (vs. 92.3%,  $p = 0.29$ ) in the first 30 min of life.

### CONCLUSION:

Short venous catheter insertion with immediate ketamine analgesia plus atropine for tracheal intubation of preterm newborns in the delivery room was effective in decreasing pain and preventing vagal bradycardia.

©2013 Foundation Acta Paediatrica. Published by John Wiley & Sons Ltd.

### KEYWORDS:

Airway management; Anaesthesia; Analgesia; Hospitals; Intensive care units; Maternity; Neonatal; Newborn infants

**Comment in** [Ketamine is a neurotoxic agent that could adversely affect the brains of preterm babies.](#) [[Acta Paediatr.](#) 2013]

PMID: 24015945 DOI: [10.1111/apa.12413](#)