

# Failed intubation in obstetric anaesthesia

A cohort study of patients registered in the Danish Anaesthesia Database

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## Introduction

General anaesthesia (GA) for caesarean section (CS) is associated with maternal mortality therefore regional anaesthesia (RA) is the anaesthetic method of choice<sup>1-2</sup>.

However, GA is used in some cases of emergency CS and where RA is not an option - or fails. Our aim was to identify CS patients in GA with difficult airway management (DAM) and failed tracheal intubation registered in the Danish Anaesthesia Database (DAD) in order to describe patient management in detail.

## Patient and methods

The National Board of Health consented to the requisition of patient records in cases with DAM. We retrieved a cohort of 20,507 CS patients registered in the DAD from June 2008 to June 2011. Records of CS patients in GA were further analysed with reference to the provided airway management. Two independent experts in obstetric anaesthesia and DAM evaluated the patient management in cases with failed intubation according to the Danish obstetric anaesthesia guideline. Where experts disagreed a third independent assessor evaluated patient treatment.



	Reviewer 1	Reviewer 2
Emergency CS, grade 1	5/11	5/11
Consultant present	11/11	11/11
Airway assessment, documented	7/11	7/11
RA attempted	4/11	4/11
DAM anticipated	4/11	4/11
Guideline followed, documented	0/11	4/11
Airway management LMA	8/11	7/11
Patients informed of DAM, documented	2/11	4/11

## Results

A proportion of 9.6 % of CS patients had a GA of which 1.8 % were registered with DAM. Ninety-three % concerned unanticipated DAM. Thirteen patients were registered with a failed intubation. One patient was erroneously registered with DAM and one patient record was lost in local hospital archive. Consequently, eleven patients with failed intubation were eligible for further analysis.

A consultant was present at all failed intubations. A RA was attempted prior to GA in four patients. In one case a GA was provided due to maternal request. Five cases concerned emergency grade 1 CS. A sufficient preoperative airway assessment was documented in one patient and airway assessment lacked altogether in another four.

One patient was administered a second dose of suxamethonium. Two patients were mask ventilated all through the CS procedure and a total dose of 2,250 mg thiopental was administered to one of these patients.

In five patients the recorded number of intubation attempts was two to four. In three patients a "can not ventilate, can not intubate situation" arose. Intubation failure was followed by successful placement of a laryngeal mask airway in eight cases. No patients died.

Two patients were informed of DAM. Experts agreed that the guideline for failed intubation was followed in four cases.

## Conclusion

DAM and failed intubation is still a serious problem in obstetric anaesthesia. Preoperative airway evaluation, DAM and postoperative patient information are documented poorly in patient files. Despite the presence of an anaesthesia specialist and a national obstetric guideline the provided patient management is substandard. The laryngeal mask airway is the preferred rescue technique in cases with failed intubation.

## Contact

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