

**R.E.D**

**RESEARCH**

**EDUCATION**

**DISSEMINATION**

*ANESTHESIA SOLUTIONS*

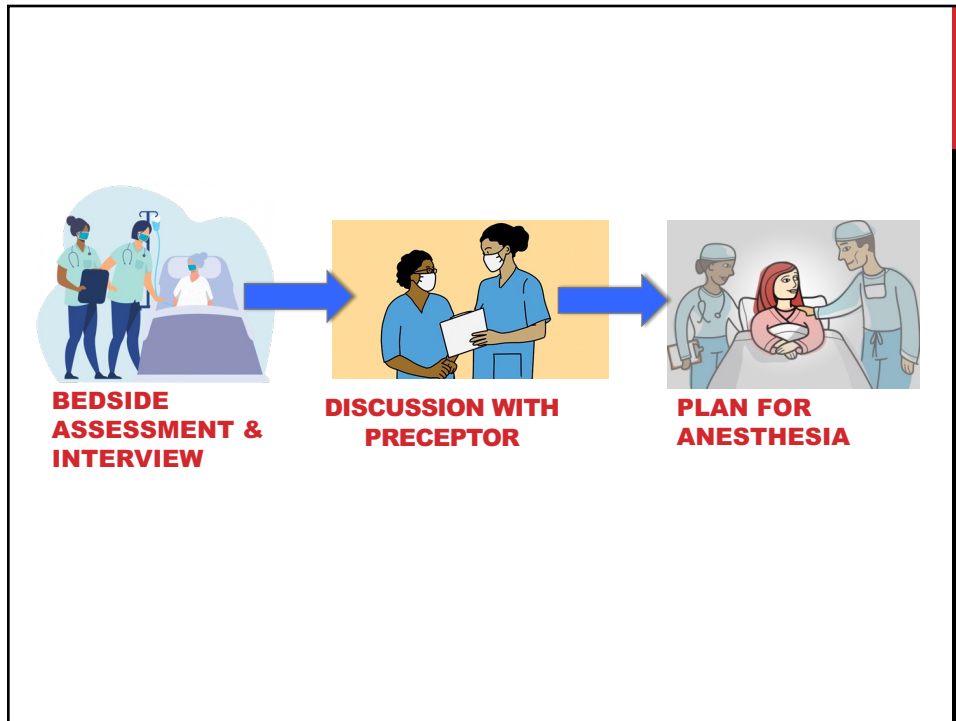
**A Case Study:  
Remifentanyl  
and  
Acceptable  
Intubating  
Conditions  
During Rapid  
Sequence  
Intubation**

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**RESEARCH GAP:**  
**LIMITED AMOUNT OF DATA REGARDING THE ADMINISTRATION OF REMIFENTANIL AND ITS ABILITY TO PROVIDE ACCEPTABLE INTUBATING CONDITIONS DURING A RAPID SEQUENCE INTUBATION**

**RESEARCH QUESTION:**  
**WHAT MEDICATION CAN WE GIVE FOR A SHORT PROCEDURE REQUIRING RAPID SEQUENCE INTUBATION WHEN SUCCINYLCHOLINE OR A NON DEPOLARIZING AGENT ARE UNDESIRABLE?**

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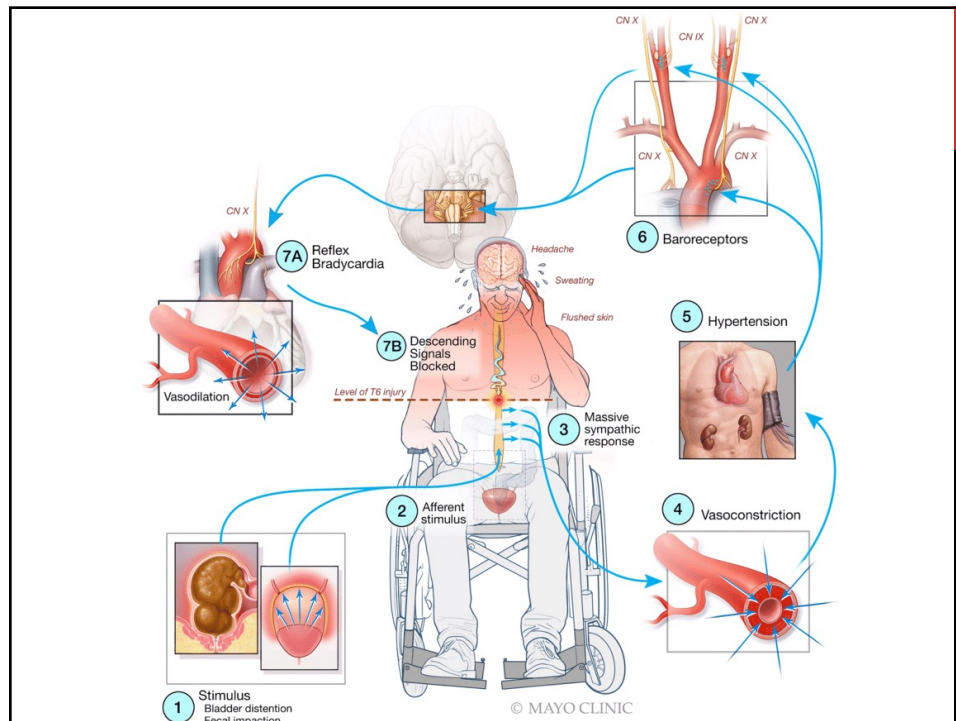
# KEY CONCEPTS/DEFINITION

Remifentanyl

Rapid Sequence Intubation

Autonomic Dysreflexia

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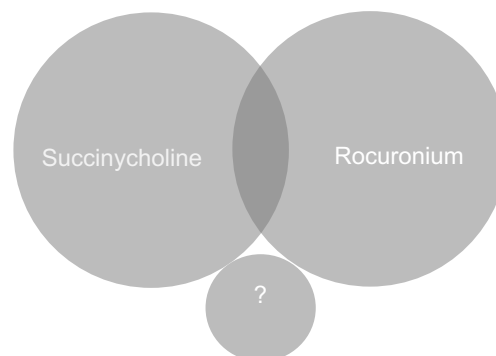
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## **STATEMENT OF OUTCOME OF RESEARCH**

**Summary of best current evidence that describes  
remifentanil as a viable option in place of succinylcholine or  
rocuronium during rapid sequence intubation**

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## **HISTORY OF THE PROBLEM**



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# METHODOLOGY

Focused on Remifentanil during normal induction without use of paralytics, then focused on RSI

- Earliest literature to most present literature
- The research focused upon
  - What dosing would provide best intubating conditions?
  - What is considered “acceptable intubating conditions”
  - What medications should be administered with it at induction?
  - Comparison to other opioids or paralytics for induction

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# RESULTS

Assessment of intubating conditions in adults after induction with propofol and varying doses of remifentanil

Remi  
2mcg/kg +  
Propofol  
2mg/kg

S. GRANT, S. NOBLE, A. WOODS, J. MURDOCH AND A. DAVIDSON

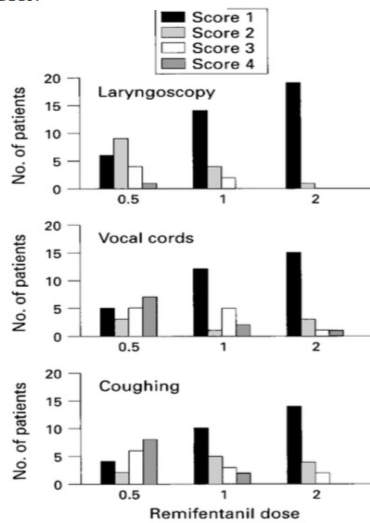
## Intubation using propofol and remifentanil

Table 1 Intubating condition score

	Score			
	1	2	3	4
Jaw relaxation	Complete	Slight tone	Stiff	Rigid
Laryngoscopy	Easy	Fair	Difficult	Impossible
Vocal cords	Open	Moving	Closing	Closed
Coughing	None	Slight	Moderate	Severe
Limb movement	None	Slight	Moderate	Severe

Table 2 Patient data (mean (SD range) or number)

	Group I	Group II	Group III
Sex (m/f)	10/10	5/15	5/15
Age (yr)	46 100-00	45 100-00	47 100-00
Weight (kg)	75 (16.2)	72 (16.8)	71 (13)



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# RESULTS

Tracheal intubation without the use of muscle relaxants:  
remifentanyl or alfentanil in combination with propofol

Remi 4mcg/kg +  
Propofol 2.5mg/kg

U.-M. Klemola, S. Mennander, L. Saarnivaara

First published: 24 December 2001 |  
https://doi-org.samuelmerritt.idm.oclc.org/10.1034/j.1399-6576.2000.440419.x | Citations: 106

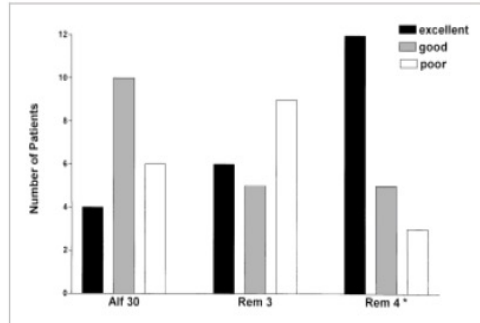


Figure 1

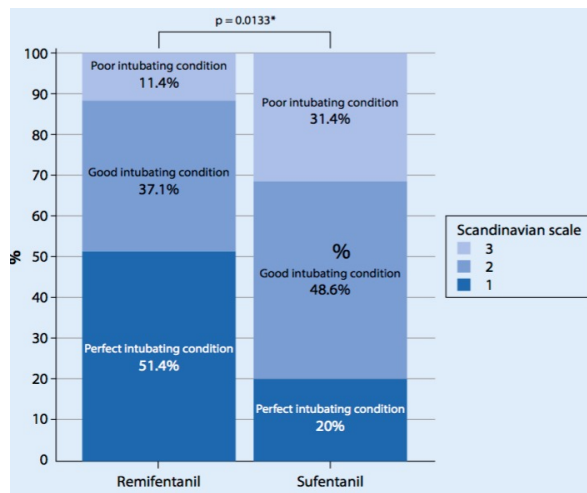
[Open in figure viewer](#) | [PowerPoint](#)

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# RESULTS

A. Dolsan · L. Bruneteau · C. Roche · F. Ferré · F. Labaste · A. Sommet · J.-M. Conil · V. Minville

Comparison of intubating conditions after induction with propofol and remifentanyl or sufentanil.  
Randomized controlled REMIDENT trial for surgical tooth extraction



Remifentanyl  
3mcg/kg +  
Propofol 3mg/kg  
provided  
successful  
intubation  
conditions when  
comared to  
sufentanil \*without  
use of paralytics

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## RESULTS

The effect of propofol/remifentanil rapid-induction technique without muscle relaxants on intraocular pressure ☆

Sherine F. Hanna MD (Associate Professor)  , Fatima Ahmad MD (Associate Professor), Ana Lucia S. Pappas MD (Professor), Marianne Mikat-Stevens MD (Associate Professor), W. Scott Jellish MD, PhD (Professor and Chairman), Bruce Kleinman MD (Professor), Michail N. Avramov MD, PhD (Assistant Professor)

### Propofol and Remifentanil for Rapid Sequence Intubation in a Pediatric Patient at Risk for Aspiration With Elevated Intracranial Pressure

Dewhirst, Elisabeth MBBS<sup>†</sup>; Tobias, Joseph D. MD<sup>†</sup>; Martin, David P. MD<sup>†</sup>

Author Information 

Pediatric Emergency Care: November 2013 - Volume 29 - Issue 11 - p 1201-1203  
doi: 10.1097/PEC.0b013e3182aa136d

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## RECOMMENDATIONS FOR PRACTICE

- **Continued discussion regarding situations when traditional RSI induction techniques are not applicable**
- **Further literature on RSI inductions with remifentanil and outcomes**
  - Especially involving special populations and ASA III and IV
- **In general, have multiple anesthetic plans ready**

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## **FUTURE DIRECTION IN RESEARCH**

**EDUCATION  
COMMUNICATION  
DISCUSSION**

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## **SUMMARY**



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