Comparison of Child Pain Management in two Surgical Wards in France and Québec

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Introduction

Pain management varies widely between hospitals as shown by a French review published in 1998. [1]

Barriers to the treatment of pain in children may include the following : a lack of pain assessment and reassessment, insufficient knowledge among caregivers, the myth that children, especially infants, do not feel pain the way adults do, fears of adverse effects of analgesic medications, difficulties in communication because of age, cultural or religious beliefs. [2,3]

Objectives

- **To evaluate the conformity to quality criteria**
- **To describe the management of pain in children on 2 surgical wards in France and Québec**

Material and methods

- 2 university children's hospitals
  - Hôpital Robert Debré (RD), Paris, France
  - Hôpital Sainte Justine (SJ), Montréal, Québec
- Retrospective chart review
- 100 medical records per hospital
- 25 patients per surgery
- Inpatients from the 01/06/2003 in the order of admission to the hospital
- Selected surgeries :
  - appendectomy without complications (app.)
  - arthrodesis (arth.)
  - surgical operation for vesico-ureteric reflux (refl.)
  - laparoscopic cholecystectomy (chol.)
- Time of data collection : from the departure from the recovery room until five days following the operation or until discharge if this period was shorter than five days
- A new prescription = every change in dose, drug or frequency of administration
- Three quality criteria [4-10]
- Statistical analysis with the X^2 or the Fisher's exact test for qualitative variables and the Wilcoxon test for non parametric quantitative variables.

Conformity to quality standard

Criteria 1 : The pain is assessed at the same frequency as the vital signs

	RD	SJ	X^2
The pain is assessed at the same frequency as the vital signs	70,8 % (1706)	30,9 % (682)	p<0,001
The pain is not assessed at the same frequency asthe vital signs	29,2 % (703)	69,1 % (1526)	

Criteria 2: The pain is assessed with an appropriate assessment tool.

	RD	SJ	X^2
Pain scale adapted	97,4 % (1661)	94,1 % (642)	p<0,001
Pain scale non adapted	2,6 % (45)	1,8 % (40)	

Criteria 3: The analgesic dose is appropriate. (validated dosage guideline tool elaborated at SJ and Thériaque®)

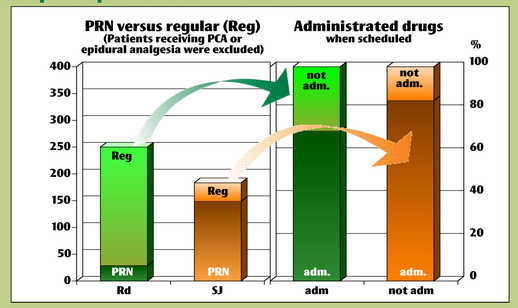
	RD	SJ	X^2
Conform	92,5 % (383)	83,3 % (429)	p<0,001
Overdose	1,9 % (8)	9,9 % (51)	
Underdose	5,6 % (23)	8,4 % (35)	

Description

Patients and prescriptions

	RD	SJ	
Mean age (years)	10,08	10,92	P=0,33
Mean hospitalization time after surgery (days)	5,18	3,98	P=0,07
Male (%)	52	33	P=0,0066

Regular prescription and administration

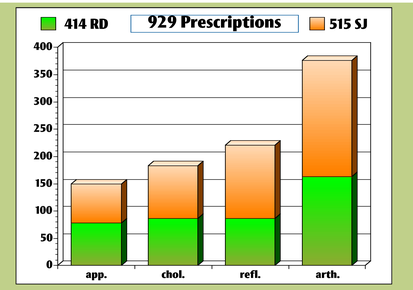


Drugs prescribed

	RD	SJ
morphine	67	143
codeine	4	35
acetaminophene + codeine	16	15
acetaminophene p.o.	129	128
ibuprofene	1	2

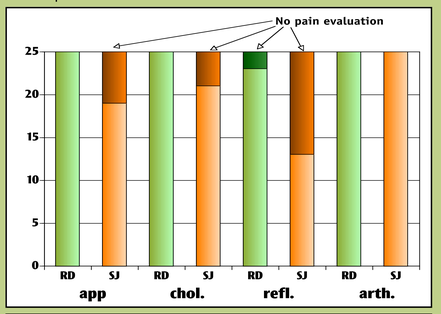
	RD
nalbuphine	125
acetaminophene i.v.	36
ketoprofene	29
acide niflumique	3
dextropropoxyphène	2
acide tiaprofénique	1
morniflumate	1

	SJ
hydromorphone	68
ketamine	50
bupivacaine	25
naproxene	27
fentanyl	17
ketorolac	3
meperidine	2

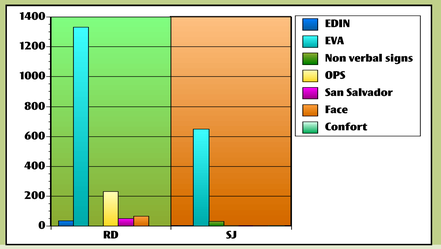


Pain Total number of pain evaluations : 1706 at RD and 682 at SJ

Patients with at least one pain evaluation



Pain assessment tools



Discussion

- First study to compare the pain assessment and management in children on 2 surgical wards in two different countries
- Main limit of this study : retrospective data collection
- The difference between the prn and scheduled analgesic drugs is significant. Preverbal children cannot request relief and older children may not know appropriate ways to signal their distress. Should it be recommended to prescribe only scheduled analgesics during the first 24 hours ?
- Clear and thorough documentation of pain and response to treatment in the medical records are essential to correct pain management. Document the pain, even if the patient does not suffer
- Difficulties to realize the quality standard. Only 3 items could be selected from consensus throughout the literature
- These 3 criteria can be used by other hospitals easily.

Conclusion

- **Pain is still widespread among hospitalised children despite ongoing efforts**
- **Great variability in pain treatment for children between hospitals**
- **Should help in informing and training health caregivers and in sensitizing them about child pain**
- **Practice comparisons might lead to better practice.**

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Thanks

Sylvie Charette (RN), Pr Yves Aigrain, Pr Georges-F Pennecot, Dr Salam Yazbeck, Pascal Bessonneau