

The Third Year Anesthesiology Residents' Knowledge Regarding Pediatric Postoperative Pain Management

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Background and Objective: There are six anesthesiology training centers in Thailand that are approved by the Royal College of Anesthesiology to operate the 3-year training program. An evidence of residents' knowledge about pediatric postoperative pain management, one of a mandatory topic, is needed for improving the training program. So we conducted this study to assess the 3-year anesthesiology residents' knowledge.

Methods: The pediatric postoperative pain management questionnaire was adapted from previous studies. The questionnaire has 35 questions to cover pediatric pain assessment and treatment. Minimal passing level of the questionnaire rated by three young anesthesiology staffs was 76.2%.

Results : The response rate was 95.2%. The proportion of the correct score was 67.7% which was lower than the minimal passing level. The highest score was 82.9% and the lowest score was 45.7%. The highest score's topic was about opioid usage. Their weak points were pain evaluation, adjunct analgesia and drug conversion.

Conclusions : Pain education has been provided during Anesthesiology training programs in Thailand. However, the third year anesthesiology residents' knowledge about pediatric postoperative pain management needs to be improved.

Key word: Anesthesiology resident, Knowledge, Pediatric, Postoperative pain management

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Introduction

The pediatric patients do not receive enough postoperative pain control¹ which affect them and their parents. The medical teams with good knowledge and attitude affect the outcome². The anesthesiologists play important role in pediatric pain control, so the purpose of this study is to assess the final year anesthesiology residents' knowledge.

Objectives

The aim of this study was to assess the third year anesthesiology residents' knowledge about acute pediatric pain management

Methods

This was a descriptive study on the third year anesthesiology residents of six anesthetic training institutes (Chulalongkorn, Ramathibodi, Siriraj, Khon Kaen, Chiangmai and Prince of Songklanakarind)in year



2012. The protocol was approved for ethic exemption by the Faculty of Medicine, Khon Kaen university's ethics committee and then the questionnaire about acute pediatric pain knowledge were sent to each institute.

Results

Out of 62 third year anesthesiology residents, 59 answered the questionnaires (a response rate of 95.8%). There were females (76.3%) more than males (23.7%). The respondents rated their knowledge about pediatric pain at medium level (55.9%), low level (39%) and 5.1% of respondents thought that they did not have the knowledge. None of them thought their knowledge at high level. (Table1)

Table 1 Demographic data of respondents

Demographic data	N (%)
Institution: Chulalongkorn	10 (16.9)
Ramathibodi	9 (15.2)
Siriraj	24 (40.7)
Khon Kaen	7 (11.9)
Chiangmai	8 (13.6)
Prince of Songklanakarind	1 (1.7)
Male : Female	14:45 (23.7:76.3)
Level of knowledge about pediatric pain management by self evaluation:Median	33 (55.9)
Low	23 (39.0)
None	3 (5.1)
Pediatric pain management was thought in the anesthesiology training curriculum:	
Yes	42 (71.2)
No	17 (28.8)
Seeking behavior for pediatric pain management from other sources:	
Yes	50 (84.8)
No	9 (15.2)

About two-third (67.1%) of the respondents did the questionnaire correctly. More than half of the respondents did the questionnaire correctly in every domain of knowledge. The domain that the highest number of respondents (77.9%) answered correctly was about opioid usage and the lowest were about pediatric pain assessment (58.6%), adjunct analgesics (59.1%) and drug conversion (59.3%) (Table 2)

Table 2 Number of respondents who answered correctly for each domains

Range	Domain of knowledge	Number of respondents who answered correctly (%)
1	Opioid usage	46 (77.9)
2	Pain attitude & pediatric pain knowledge	43.3 (73.3)
3	Adverse drug effect & treatment	39 (66.1)
4	Drug conversion	35 (59.3)
5	Adjuvant analgesics	34.8 (59.1)
6	Pediatric pain assessment	34.6 (58.6)

Discussion

The study revealed that about two-third of the respondents did the questionnaire correctly. The result was compatible with previous study³ that the third and fourth year of anesthesiology residents did the questionnaire about pediatric pain control 7.74 of 10 points.

The domain that the highest number of respondents answered correctly was about opioid usage. Morphine was the most common drug for post operative pain control⁴ so it might be the reason why the most of respondents answered correctly in this domain. The domain that lower number of respondents answered correctly were about drug conversion may due to we rarely converse the analgesics in acute pain.



Conclusion

Third year anesthesiology residents' knowledge regarding pediatric postoperative pain management were above average. The domain that the highest number of respondents answered correctly was about opioid usage and the lowest were about pediatric pain assessment. So they should train more about pediatric pain management.

Reference

1. Chen WL. Nurses' and parents' attitudes toward pain management & parental participation in postoperative care of children. Queensland University of Technology School of Nursing Centre for Health Research 2005. Available at <http://eprints.qut.edu.au/16127/>. access 25/12/2011
2. Twycross A, Williams A. Establishing the validity and reliability of a pediatric pain knowledge and attitudes questionnaire. *Pain Management Nursing* 2011; xx: 1-7. (in press)
3. Saroyan JM, Schechter WS, Tregallo ME, et al. Assessing resident knowledge of acute pain management in hospitalized children: A pilot study. *J pain symptom manage* 2008; 36: 628-38.
4. Somrat C, Somboon T, Mali R, et al. A Survey of Post Anesthetic Pain Management in Thailand. *J Med Assoc Thai* 2009; 92: 1028-32