

# Postoperative Pain in Patients with Cleft Lip and Palate in Srinagarind Hospital

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**Background:** Srinagarind Hospital has about 150-200 cases of patients with cleft lip and cleft palate each year. The operating process requires continuity of care involving a multidisciplinary team. When the patients go to hospital to undergo operation, pain is one of the most important symptoms to try and control effectively. During pre and post operative care nurses who work continuously and closely with the patients are the best persons to assist with pain relief. They need to have knowledge, experience and ability to take excellent care about pain control as well as having to have continuing assessment and selection of pain measurement tool. They can then better help to relieve patients pain, decrease parents stress and encourage better co-operation.

**Objective:** To the present study pain score level in patients with cleft lip cleft palate during the 24 hour period after operation.

**Material and Method:** This is the retrospective descriptive study. Data was collected from medical records. 86 Medical records of the patients with cleft lip cleft palate who were admitted in 3c ward between January to December 2010. Medical Records were purposively selected for the study and recorded with a data collection form.

**Result:** 39% of patients after cheiloplasty and 55.6% of patients after palatoplasty received painkillers before leaving operating room, 29.29% of patients after cheiloplasty and 15.50% of patients after palatoplasty had severe pain immediately in ward. 48.8% of patients after cheiloplasty have moderate to severe pain at the 4<sup>th</sup> hour. Pain score was less when longer time after operation. Only 7.3% have pain after the 16<sup>th</sup> hour and pain finish after the 20<sup>th</sup> hour after operation. 51.1% in patients after palatoplasty have moderate to very severe pain at the 4<sup>th</sup> hour and 15.6% have moderate to very severe pain still occurring until the 24<sup>th</sup> hour.

**Conclusion:** Some of the patients with cleft lip and palate after operation received painkillers before leaving operating room. Pain score immediately at ward is severe to very severe pain. 22.09% of patients after cheiloplasty and palatoplasty have moderate to severe pain at the 4<sup>th</sup> hour. For patients after cheiloplasty pain will continue until the 16<sup>th</sup> hour after operation, but patients after palatoplasty pain will continue more than 24 hours.

**Keywords:** Cleft lip and palate, Pain score, Post operative

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Cleft lip and cleft palate are the most common craniofacial anomalies<sup>(1,2)</sup>. Srinagarind Hospital has about 150-200 cases of patients with cleft lip and cleft palate each year<sup>(3)</sup>. The operating process requires continuity of care involving a multidisciplinary team<sup>(4)</sup>. When the patients go to hospital to undergo operation, pain is one of the most important symptoms to try and control effectively. Some studies found that 80% of patients have moderate to severe pain after operation

especially after 24-48 hours<sup>(5)</sup>. During pre and post operative care nurses who work continuously and closely with the patients are the best persons to assist with pain relief. They need to have knowledge, experience and ability to take excellent care about pain control as well as having to have continuing assessment and selection of pain measurement tool. Then they can better help to relieve patients pain, decrease parents stress and encourage better co-operation<sup>(5)</sup>.

Pain assessment is very important for nursing. It's quite hard to assess pain in children, because the patients usual expression of pain behavior is similar to other feelings such as hunger, heat and feeling uncomfortable<sup>(6)</sup>. So mistakes can be made for pain assessment results.

Patients with cleft lip cleft palate in

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Srinagarind Hospital will have an operation for cheiloplasty at 3-6 months old, and an operation for palatoplasty at 9 months to 2 years old<sup>(7)</sup>. After the operation the main problem for patients is pain. Pain assessment will start immediately when patients arrive at the ward by nurses then every 4 hours until discharged. "NIPS PAIN Scale" will be use to assess the pain in patients who are 0-1 year old<sup>(8)</sup>. "FLACC Pain Scale" will be use to assess the pain in patients who are 1-6 year old<sup>(9)</sup>.

Studying the pain score level after operation in patients with cleft lip cleft palate will start after the operation and continue until discharge so nurses can better understand pain behavior in patients and after that nurses should have improved ability to manage pain.

### **Research Question**

How does the pain score in patients with cleft lip and palate during the 24 hours after operation?

### **Objective**

To study pain score level in patient with cleft lip cleft palate in the 24 hour period following operation.

### **Pain and Pain assessment**

Pain is a personal subjective experience that cannot be measured like a fever. Pain in children is very hard to assess because the children cannot explain about their pain by themselves. Pain in children can be assessed from the observation of behavior<sup>(10)</sup>. There are 3 methods for assessment of pain, thus<sup>(11)</sup>.

#### ***Physiological assessment***

It is the measurement of physiological changes caused by changing vital signs such as blood pressure, pulse rate and respiratory rate, but there are also other factors affecting physiological changing for example: fear, anxiety and stress, so all these are a limitation for the measurement of physiological changing.

#### ***Behavioral assessment***

It is the observation of behavior and setting the level or scale of pain, such as facial expression, vocalization, body movement and other behavioral response to environment. This method can be used when patients cannot talk about pain score themselves.

#### ***Self-report assessment***

It is the best method because pain is the

personal subjective experience. It is good method for children who can understand the numbers.

### **Pain assessment tools in children**

In Srinagarind Hospital the authors use 2 tools to assess pain score in patients who are 1-6 year old.

#### ***NIPS Pain Scale (Neonatal Infant Pain Scale)***

It is the behavioral assessment tool for measurement of pain in neonates who are 0-1 years old<sup>(8)</sup>. If the pain score level is more than 4 then the authors should consider giving pain killer to the patient.

#### ***FLACC pain scale***

It is a behavior pain assessment scale use in non-verbal patients who are unable to report pain with ages between 1 to 6 years old<sup>(9)</sup>.

### **Material and Method**

This is the retrospective descriptive study. The data was collected from medical records. To the present study the potential of pain score level in the 24 hour period following operation in patients with cleft lip, cleft palate who had cheiloplasty or palatoplasty.

#### ***Sample population***

Medical records of the patients with cleft lip cleft palate who were admitted in 3c ward between January-December 2010. Medical Records of the patients with cleft lip and palate repair were purposively selected for the present study according to the following criteria:

##### ***Inclusion criteria:***

- Patients with cleft lip repair.
- Patients with cleft palate repair.
- Age from 3 months -2 years old.

##### ***Exclusion criteria:***

Patients with cleft lip and palate and another anomalies.

#### ***Data collection***

86 Medical records of patients with cleft lip or cleft lip and palate who underwent operation and admitted in 3C ward, Srinagarind Hospital between January-December 2010 were recorded with data collection form by nurse.

#### ***Data analysis***

There are two main parts of analysis, describing characteristics of the patients and analysis

for answering the research question. Categorical data: age, sex, diagnosis, type of surgery, economic status will be presented by number and percentage. Continuous data: length of stay presented by mean and standard deviation. Pain score level will be presented by number and percentage.

**Measurement of the outcome**

Demographic data questionnaires selected for study were age, sex, diagnosis, type of surgery, economic and length of stay.

Pain Score: 2 tools assessment thus:

**1. FLACC Pain Scale**

In patients from 1-6 years old, pain score was divided into 5 levels 0 = None, 1-2 = Mild, 3-4 =

Moderate, 5-6 = Severe, 7-10 = Very Severe.

**2. NIPS Pain Scale (Neonatal Infant Pain Scale)**

In neonates patients who were 0-1 year old, pain score was divided into 4 levels 0 = None, 1-3 = Mild, 4-5 = Moderate, 6-7 = Severe.

**Results**

**Demographic data**

From 86 Medical Record of patients with cleft lip and cleft palate. 50 cases are male (58.1%), 36 cases are female (41.9%). 43 cases (50.3%) were patients with cleft lip and palate, 23 cases (26.4%) were patients with cleft palate and 20 cases (23.3%) were patients with cleft lip. 79 (91.9%) of medical treatment is subsidized

Neonatal Infants Pain Scale (NIPS)

Facial expression	Cry	Breathing patterns	Arms	Legs	State of arousal
0 = relaxed 1 = grimace	0 = no cry 1 = whimper 2 = vigorous crying	0 = relaxed 1 = change in breathing	0 = restrained/Relaxed 1 = flexed/Extended	0 = restrained/relaxed 1 = flexed/extended	0 = sleeping/awake 1 = fussy

The level of NIPS pain scale: 0 = None, 1-3 = Mild, 4-5 = Moderate and 6-7 = Severe

FLACC Pain Scale

Categories	Definition	Scoring
Face (F)	-No particular expression or smile	0
	-Occasional grimace or frown, withdrawn, disinterested	1
	-Frequent to constant frown, clenched jaw, quivering chin	2
Leg (L)	-Normal position or relaxed	0
	-Uneasy, restless, tense	1
	-Kicking, or legs drawn up	2
Activities (A)	-Lying quietly, normal position, moves easily	0
	-Squirming, shifting back/forth, tense	1
	-Arched, rigid or jerking	2
Cry	-No cry (Awake or Asleep)	0
	-Moans or whimpers, occasional complaint	1
	-Crying Steadily, screams or sobs, frequent complaints	2
Consolability (C)	-Content, relaxed	0
	-Reassured by occasional touching, hugging, or 'talking to distractible	1
	-Difficult to console or comfort	2

The level of FLACC pain scale: 0 = None, 1-2 = Mild, 3-4 = Moderate, 5-6 = Severe and 7-10 = Very Severe

by the government. 45 cases(52.3%) were palatoplasty and 41 cases (47.7%) were cheiloplasty.

**Length of stay**

Patients with cheiloplasty stayed in hospital 2-3 days,average 2.17 days.Patients with palatoplasty stayed in hospital 2-7 days,average 3.11 days.

**Painkiller before leave operating room**

16 cases (39%) of patient after operation for cheiloplasty, 25 cases(55.6%) of patient after operation for palatoplasty received painkiller before leave operating room.

**Pain score immediately at ward**

The authors found that 12 cases(29.29%)of patients after cheiloplasty have severe pain and 7 cases(15.5%) of patients after palatoplasty had severe to very severe pain.

**Pain score level in 24 hours after operation**

**Pain score level in 24 hours after cheiloplasty**

Pain score level in the 4<sup>th</sup> hours ; 21 cases( 51.2%) no pain, 15 cases (36.6%)have severe pain. Pain score in the 8<sup>th</sup> hours ; 15 cases (36.6%) have severe pain, 15 cases(36.6%) have no pain. Pain score level in the 12<sup>th</sup> hours; 25 cases(61%) have no pain, 8 cases (19.5%) have moderate pain. Pain score level in the16<sup>th</sup> hours 35 cases (85.4%) have no pain, 4 cases (9.8%)have severe pain. Pain score level in the 20<sup>th</sup>hours 38 cases (92.7%) have no pain, 2 cases (4.8%) have moderate pain. No patient present pain level in the 24<sup>th</sup> hours (Table 1).

The authors also found that in between the 4 hour pain assessment periods 19 cases (7.79%) of patients have moderate to severe pain.

**Pain score level in 24 hours after palatoplasty**

Pain score level in the 4<sup>th</sup> hours; 22 cases

(48.9%) have no pain, 15 cases (33.3%) have very severe pain and 6 cases(13.3%) have severe pain. Pain score level in the 8<sup>th</sup> hours; 21 cases (46.7%) have no pain , 14 cases(31.1%) have severe pain and 8 cases (17.8%) have very severe pain. Pain score level in the 12<sup>th</sup> hours; 26 cases (57.8%) have no pain, 12 cases (26.6%) have very severe pain and 4 cases (8.9%) have moderate pain. Pain score level in the 16<sup>th</sup>hours; 35 cases (77.8%) have no pain, 6 cases (13.3%) have severe pain and 2 cases (4.4%) have moderate pain. Pain score level in the 20<sup>th</sup> hours 35 cases (77.8%) have no pain, 4 cases (8.9%) have moderate pain and 3 cases (6.7%) have severe pain. Pain score level in the 24<sup>th</sup> hours; 38 cases (84.8%) have no pain, 4 cases (8.9%) are severe pain and 1 case (2.2%) is very severe pain (Table 2).

The authors also found that in between 4 hours pain assessment periods 8 cases (3.15%) of patients had severe to very severe pain.

**Discussion and conclusion**

The present study show that 39 % of patients after cheiloplasty and 53.3% of patients after palatoplasty received painkillers before leave operating room. 29.29% of patients after cheiloplasty, 15.5% of patients after palatoplasty have severe to very severe pain immediately at ward. This maybe because after palatoplasty patients receive pain killer before leave operating room. 51.2% of patients after cheiloplasty and 48.9% of patients after palatoplasty have moderate to severe pain in the 4<sup>th</sup> hour, because patients after cheiloplasty received pain killers when they arrived ward (pain score assessment 4 or more). After cheiloplasty patients have pain continue until 16 hour and finish in the 20<sup>th</sup> hour after operation. Patients after palatoplasty pain will continue more than 24 hours, because palatoplasty causes more tissue damage during operation.

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**Table 1.** Pain score level in 24 hours after cheiloplasty operation

Pain score level	4 <sup>th</sup> hours		8 <sup>th</sup> hours		12 <sup>th</sup> hours		16 <sup>th</sup> hours		20 <sup>th</sup> hours		24 <sup>th</sup> hours	
	cases	%	cases	%	cases	%	Cases	%	cases	%	cases	%
Non	21	51.2	15	36.6	25	61	35	85.4	38	92.7	0	0
Mild	0	0	1	2.4	1	2.4	1	2.4	0	0	0	0
Moderate	5	12.2	10	24.4	8	19.5	1	2.4	2	4.8	0	0
Severe	15	36.6	15	36.6	7	17	4	9.8	1	2.4	0	0

**Table 2.** Pain score level in 24 hours after palatoplasty operation

Pain score level	4 <sup>th</sup> hours		8 <sup>th</sup> hours		12 <sup>th</sup> hours		16 <sup>th</sup> hours		20 <sup>th</sup> hours		24 <sup>th</sup> hours	
	cases	%	cases	%	cases	%	cases	%	cases	%	cases	%
Non	22	48.9	21	46.7	26	57.8	35	77.8	35	77.8	38	84.4
Mild	0	0	0	0	0	0	1	2.2	1	2.2	1	2.2
Moderate	2	4.4	2	4.4	4	8.9	2	4.4	4	8.9	1	2.2
Severe	6	13.3	14	31.1	3	6.7	6	13.3	3	6.7	4	8.9
Verysevere	15	33.3	8	17.8	12	26.6	1	2.2	2	4.4	1	2.2

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#### Potential conflicts of interest

None.

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## ความปวดหลังผ่าตัดในผู้ป่วยเด็กปากแหว่งเพดานโหว่ที่เข้ารับการรักษาในโรงพยาบาลศรีนครินทร์

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**ภูมิหลัง:** โรงพยาบาลศรีนครินทร์มีผู้ป่วยปากแหว่งเพดานโหว่ เข้ารับการรักษา 150-200 รายต่อปี กระบวนการรักษาดูแลผู้ป่วย เป็นการรักษาที่ใช้ระยะเวลาที่ยาวนานต่อเนื่อง และเกี่ยวข้องกับสัมพันธ์กันหลายสาขาวิชาชีพ เมื่อต้องผ่าตัดการผ่าตัดก่อให้เกิดความเจ็บปวด ทุกข์ทรมาน ซึ่งจะต้องมีการควบคุมอย่างมีประสิทธิภาพ การดูแลก่อนและหลังผ่าตัด พยาบาลเป็นบุคคลที่ทำงานใกล้ชิดกับผู้ป่วย เป็นบุคคลสำคัญในการช่วยลดความปวดให้ผู้ป่วย จึงต้องมีความรู้ มีประสบการณ์ และมีความสามารถในเรื่องการควบคุมความปวดรวมทั้งการประเมินและการเลือกใช้วิธีการประเมินความปวด ที่จะช่วยลดความปวดทุเลาลง ลดความเครียดของผู้ปกครองและช่วยให้เกิดความร่วมมือขึ้น

**วัตถุประสงค์:** เพื่อศึกษาระดับความปวดในผู้ป่วยปากแหว่งเพดานโหว่ที่เข้าผ่าตัดใน 24 ชั่วโมง

**วัสดุและวิธีการ:** การศึกษาครั้งนี้เป็นการศึกษาเชิงพรรณนา เก็บข้อมูลย้อนหลังจากเวชระเบียนผู้ป่วย

ปากแหว่งเพดานโหว่ที่เข้ารับการรักษา และได้รับการผ่าตัดในโรงพยาบาลศรีนครินทร์ ระหว่างเดือน มกราคม พ.ศ. 2553 ถึง ธันวาคม พ.ศ. 2553 จำนวน 86 ราย เป็นการเลือกกลุ่มตัวอย่างแบบเฉพาะเจาะจงเก็บข้อมูลโดยใช้แบบบันทึกการเก็บข้อมูล

**ผลการศึกษา:** พบว่าผู้ป่วยหลังผ่าตัดแก้ไขปากแหว่ง และผู้ป่วยหลังผ่าตัดแก้ไขเพดานโหว่ ได้รับยาแก้ปวดก่อนออกจากห้องผ่าตัดร้อยละ 39.0 และ 55.6 ตามลำดับ และมีระดับความปวดมากที่สุดทันทีที่กลับถึงหอผู้ป่วย ร้อยละ 29.29 และ 15.50 ตามลำดับ ผู้ป่วยหลังผ่าตัดแก้ไขปากแหว่ง มีความปวดปานกลางถึงปวดมากในช่วงที่ 4 ร้อยละ 48.8 คะแนนความปวดจะลดลงตามเวลาหลังการผ่าตัด มีผู้ป่วยร้อยละ 7.3 ที่มีความปวดหลังชั่วโมงที่ 16 และความปวดหมดไปหลังชั่วโมงที่ 20 ส่วนผู้ป่วยหลังผ่าตัดแก้ไขเพดานโหว่ มีความปวดปานกลางถึงปวดมากที่สุดในช่วงที่ 4 ร้อยละ 51.1 และยังมีความปวดปานกลางถึงปวดมากจนกระทั่งชั่วโมงที่ 24 ร้อยละ 15.6

**สรุป:** ผู้ป่วยหลังผ่าตัดแก้ไขปากแหว่ง และแก้ไขเพดานโหว่ บางรายได้รับยาฉีดแก้ปวดก่อนออกจากห้องผ่าตัด ผู้ป่วยมีระดับความปวดระดับปานกลางถึงปวดมากที่สุดทันทีที่กลับถึงหอผู้ป่วยร้อยละ 22.09 ผู้ป่วยหลังผ่าตัดแก้ไขปากแหว่ง และแก้ไขเพดานโหว่ มีความปวดปานกลางถึงระดับมากที่สุด ในช่วงที่ 4 และความปวดในผู้ป่วยหลังผ่าตัดแก้ไขปากแหว่ง จะยังคงมีอยู่จนถึงชั่วโมงที่ 16 แต่ความปวดในผู้ป่วยหลังผ่าตัดแก้ไขเพดานโหว่ ยังคงมีอยู่เกินกว่า ชั่วโมงที่ 24

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