Evidence-Triggered for Care of Patients with Cleft Lip and Palate in Srinagarind Hospital: Operating Room

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Background: The operating room Srinagarind hospital handles most cases that require surgical repair including cleft lip and palate patients. The average number of patients undergone surgical correction has risen to 216 in 2016 from 150 in 2014. Patients who underwent surgery, particularly infants had to be separated from family, stay in restricted place, abstaining from food and water, these create stress, fear, anxiety and pain to the child and may have affected to the outcomes of the treatment. For parents and families will also are anxious, and fears about the disease and treatment, losing children, disabled children after the surgery. In addition, their concerns with complications of surgery and chance of recovery. Therefore, there is a need to examine the clinical problems of patients who undergo surgery for cleft lip and palate in order to provide comprehensive care.

Objective: To identify problems in regards to care for patients with cleft lip and palate, in the operating room, Srinagarind Hospital.

Material and Method: The descriptive study was conducted involving nine departments of nursing services, Srinagarind Hospital. After the consideration of human ethic, both quantitative and qualitative data were collected based on The Center for Advance Nursing Practice Model through the following four stimulators: 1) reviewed 30 patients medical records; 2) reviewed four related literatures; 3) surveyed nurses opinion towards health condition’s and the effects of the 10 families with cleft lip and palate; and 4) interviewed ten mothers and families towards the health of cleft lip and palate children. The interviews obtained 15-20 minutes per case with a total of eight months of collecting data (June 2015 - January 2016). The quantitative data were analyzed using percentage and content analyses were used with qualitative data.

Results: There were four cases underwent operation for cleft lip and palate (40%) four cases underwent age 3-6 months and 10-18 month four cases underwent age 3-6 months and 10-18 month(40%) which included six male (60%) and ten female caregivers (100%), four of which aged older than 50 years (40%), three cases were each a farmer and housekeeper. For nurses, the majority aged between 40-44 years, nine of which had bachelor degree (90%).

The results from nurses’ survey found that the caregiver concerned about patients’ hunger, and surgical complications such as hypothermia, pressure ulcers from operation, postural, bleeding after operation which need additional operation, something stuck in operating wound, and infected wound.

The interviewing with the caregiver and mother towards patient health conditions found that the caregivers concerned about anesthetic procedure, wound separation and infection, and the operating cost. Most patients felt fear of fainting and thirsty since food and water discontinuation.

Based on the literature review, the problems included the caregivers’ concerns about surgical complications which these were similar to those results from the nurses’ survey.

Conclusion: Problems for care of patients with cleft lip and palate in the operating room in Srinagarind Hospital were: 1) concerns about the operation and cost of treatment, 2) surgical complication both immediate and long-term complications, 3) concerns about pain and wound infection. Such evidence would be used in the development plan towards nursing system for cleft lip and palate patients in the operating room.

Keywords: Cleft lip and Palate, Evidence-triggered, Operating room, Srinagarind Hospital

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The cleft lip and palate is a congenital abnormality of the face and mouth, which is the 4th most common found among all disabilities. This might happen either cleft lip and palate alone or with other abnormalities. More than 13% of infants with cleft lip condition can have other disabilities. In the northeastern region of Thailand found 2.49 per 1,000 birth rate\(^2\), while in Thailand found 1.51 births per 1,000 birth rate\(^2\).

The operation for patients with cleft lip and palate in Srinagarind Hospital, Faculty of Medicine, Khon Kaen University began since 1978\(^3\), in accordance with the records from 1983 till now, the number of patients had increased to 200-250 cases a year, in which 216 cases in 2014\(^4\) and 121 cases in 2015\(^5\).

The operative numbers for cleft lip and palate in Srinagarind Hospital are average of 150 cases per year\(^5\). The nurses in the operating room are part of the multidisciplinary team. They are responsible to care for the patients both before and after the operation which takes about 2.25 hour per case, including coordinating with nurses of Tawanchai center towards the promptness of an extra equipment of nostril retainer. Moreover, nine related nursing network teams are involved in the care comprising nurses from: 1) antenatal clinics, 2) labour rooms, 3) postpartum care, 4) family planning unit, 5) surgery examination rooms, 6) operating rooms, 7) anesthetic nurses, 8) surgical ward, and 9) Tawanchai center. Besides, there is possible to make the coordination among other departments as orthodontics clinic and other diagnostic room, etc. Based on good coordination of the team in assisting the patients to have safe and continuing care effectively. By observing and interviewing with nurses working in operating room and the families who care for patients with cleft lip and palate, the problems in patient care were found, including issues related to mothers and families who share custody. In order to provide effective care, there is a need to find out related problems resulting from the operation and pre and post-operative care.

**Objective**

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**Material and Method**

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**Results**

Table 1 shows demographic data of the participants. There were four cases underwent operation for cleft lip and palate (40%) four cases underwent age 3-6 months and 10-18 month (40%) which included six male (60%) and ten female caregivers (100%), four of which aged older than 50 years (40%), three cases were each a farmer and housekeeper. For nurses, the majority aged between 40-44 years, nine of which had bachelor degree (90%). Half of the participating nurses had working experience of one to five years whereas the other half had more than five years working experience.

2) In regard to the patients’ survey, the patients concerned about anesthetic procedure, wound separation and infection, and the operating cost. Most patients felt fear of fainting and thirsty since food and water discontinuation. The results are shown in Table 2.

3) The results from nurses’ survey found that the caregiver concerned about patients’ hunger, and surgical complications such as hypothermia, pressure ulcers from operation, postural, bleeding after operation which need additional operation, something stuck in operating wound, and infected wound. However, there was no report on complications in according to the surgical records.

4) Based on the literature review, the problems included the caregivers’ concerns about surgical complications\(^6-9\) which these were similar to those results from the nurses’ survey.

**We review literature from**

hypothermia in one patient. Difficulties during intubation led to fiberoptic intubation in one infant, and reintubation in another. Laryngospasm and bronchospasm each occurred once. During the 174 operations 25 (14.4%) severe complications occurred in 13 patients. Two of these 25 severe complications appeared in the group of syndromic cleft patients (2/5, Down’s syndrome (two patients), De-Georgie’s Syndrome, Marfan’s syndrome, Pierre Robin’s). The problems summary were temperature changing, endotracheal tube moving, blood pressure increasing.


Although of the work of perioperative nursing involves patient safety. Protecting patients from risks related to the procedure, positioning, equipment and environment. It is essential that nurses assess risks to the patients and implements to minimize these risks proactively. Stellman et al (2013) surveyed perioperative nurses to identify what safety issues they consider to be the highest priority. They obtained 3,137 usable respondents. The majority of nurses considered preventing wrong site, most procedure, or patient surgery (69%) and prevention retain surgical item (61%) to be high-priority safety issues in need of heightened attention. More than one third of respondents identified preventing medication error, failure in instrument reprocessing, pressure injuries, specimen management errors, perioperative hypothermia, burn from energy devices and surgical fire to be high-priority issues as well. The problems summary were wrong site, procedure or patient, retain surgical item, medication error, failure in instrument reprocessing, pressure injuries, surgical fire, specimen management errors, perioperative hypothermia, burn from energy devices.


Preoperative care:

In preoperative period, patients may have trouble as the following: risk to danger from accidents such as mistake in moving the patient into the operating room or an accident while waiting for surgery, and moving the patient who not be ready to have the surgery, their family/patient got anxiety and fears about the environment and the personnel in the operating room, their relatives are concerned about the patient.

Perioperative care:

In according to patients in the operating room when the operating team is ready to do surgery, the anesthesiologists will provide anesthesia to patients.
before deal with proper positioning. The nursing in this period, nurses must be an assistant towards the proper posture with a surgeon before cleaning surgery area and a sterile cloth in order to prevent inappropriate complicacy. To nurse the patients during surgery, the problems may happen with the patient are as follows: retain surgical item, danger from electrosurgical, complicacy during positioning such as anoxia, pressure ulcer, skin over bone infected, hypothermia, and bleeding.

**After the operation**

After the operation, the anesthesiologist/nurse would assess whether the patient wake up well, able to breathe by themselves. If so, they will take the extubation out and check respiratory before move to the recovery room. The problems might happen after surgery were general anesthesia, uncomforting from wet/blood dirty cloth on the area of wound. They would be moved to the recovery room in order the nurse would quickly assess patient condition and give close care. They also observe the all conditions over the body and any complicacy such as bleeding, wound hurting, falling down the bed, and mental and feeling. Most of the cleft lips and cleft palate patients are children which they are transferred to the recovery room where the nurses call their relatives to stay until the ward. They also take care while moving from recovery room to ward by observing the irregular breathing, nausea and vomiting, lifting up 2 flat bed to convoy falling down, putting blanket to warm up their body.


Up to 70% of surgical patients develop hypothermia perioperatively. Inadvertent hypothermia

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**Table 2.** The opinions of the caregiver towards health and sickness conditions of the patients with cleft lip and cleft palate patients who underwent operation

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<th>References</th>
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<th>Problem summary</th>
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| Caregivers of cleft lips and cleft palate patients | 1) Anxiety: caregivers felt anxiety about the operation, patient’s recovery from anesthesia, and wound infection.  
2) Fear (patients): the operated cases were mostly children who were unfamiliar with the operating room. So this made them feel fear and separation. Most of them cried out and needed the caregiver to be with them while waiting for the operation.  
3) Hunger: the patient who discontinue of food and water feared of hunger, so they cried out during waiting.  
4) Hospital cost: the caregivers concerned about the healthcare cost. | Anxiety  
Fears of separation  
Hunger  
More expenditure |

**Table 3.** The opinions of the operating nurse towards health problems of the cleft lip and cleft palate patients

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<th>References</th>
<th>Content</th>
<th>Problem summary</th>
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| 30 medical records from operating nurses | 1) Caregivers concerned about the patients those who cried out while being transferred.  
2) Some patients yelled because of the hunger.  
3) Concerns about operative complications such as hypothermia, pressure ulcers from operating, postural, bleeding after operating which might need additional operation, residues in operating wound and wound infection.  
4) Unprompted of the operating team which might cause cancellation of postpone of the surgery.  
5) Concerns about patient fell down while moving or staying on the operating bed. | Anxiety  
Hunger  
Residues in operating wound  
Hypothermia  
Pressure ulcers  
Bleeding  
Cancellation or postpone of the surgery  
Patient fell down of the surgical bed |
can be caused by a cold operating theatre, anaesthetic effects, exposure to the environment and administration of cold intravenous or irrigation fluids. The adverse effects of unplanned hypothermia include increased blood loss, morbid cardiac events, impaired wound healing and increased mortality.

**Discussion**

Before operation, patients were found stress, anxiety, and afraid of the surgery. Although some patients and families had knowledge or experience in the operation before, the caregivers still having the feeling of anxiety and fears about anesthesia, losing their children, or their children would be disabled after the surgery. In addition, the concerns over surgical treatment of children will have an impact on financial status of the family. This consistent with the study of Ardsalee(6) that patients might have problems in the preparative care such as risks to have accident during operation, accident while transferring patients to the operation room or while waiting.

During operation, the possible problems that might be occurred such as residues in operating wound, danger from electrosurgical, complications during positioning such as anoxia, pressure ulcers, wound infection, hypothermia, bleeding, in which these are consistent with Knaepel et al(7). This study found more than 70% of operated patients had hypothermia. Rothrock(8) who claimed the study of Stellman et al that the safety was the most importance. Most nurses agreed to prevent for wrong procedures performed for patient (69%) and prevention of retain surgical item (61%)(8). These were critical problems which needed an intensive care. Furthermore, other problems were also addressed such as surgery on the wrong site, retain surgical items, medication errors, failure in instrument reprocessing, pressure injuries, surgical fire, specimen management errors, perioperative hypothermia, or burn from energy devices(6-9).

After operation, the complications might also happen, including bleeding, wound hurting, patients falling down from the bed. These were similar to the study of Ardsalee(6) which found that the patients would have pain on operation wound and other accident. The children patients therefore needed to have serious post-operative care.

**Conclusion**

The care for patients with cleft lip and palate in the operating room in Srinagarind hospital should include: 1) caring for the patient’s and their caregivers’ concerns and anxiety of the operation and financial issues, 2) surgical complications such as residues in operating wound, danger from electrosurgical, positioning, wound infection, hypothermia, bleeding, falling down or asphyxia, and 3) uncomforting issues from wet/blood or dirty clothes on the area of wound. This evidence would be used to plan the system of care for the patients with cleft lips and cleft palate in the operating room.

**What is already known on this topic?**

Patients with cleft lips and cleft palate who underwent operation felt fear and wanted to be close with their caregiver all the time in which the caregivers themselves also concerned over the safety in regard to the surgery for their children.

**What this study adds?**

The operation of cleft lips and cleft palate may lead to many complications as temperature changing, pressure ulcer, and danger from electrosurgical. Concerns over the surgery of the patients, their caregivers and the nurses who taking care of the patients need to take into account in order to have effective surgery and care for the patients.

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**Potential conflicts of interest**

None.

**References**

3. Center of Cleft lip - Cleft Palate and Craniofacial Deformities, Khon Kaen University under the Tawanchai Royal Granted Project, Thailand (Tawanchai Center). Results of operations for the year of Center of Cleft Lip-Palate and Craniofacial
ก้านเหยี่ยวทางคลิปมันของผู้ป่วยโรคปากและฟันไหล่จมูกศีรษานิทรรศ: ห้องคัด

วัฏจักร เรลชอิน, ศักดิ์ เทียนวิชัย, เบญช่า ชีวิต, นราศัยรัศมี เเขวี่ยชิน

คุณต้อง: ห้องคัดโรงพยาบาลศิริราชเป็นหน่วยที่ให้บริการผู้ป่วยโรคปากและฟันคลิปมันและระบบด้านผู้ป่วยปากและฟันไหล่จมูกศีรษานิทรรศ โดยมีจำนวนผู้ป่วยมีจำนวนทั้งหมด 150 ราย จากนั้นจะส่งผู้ป่วยให้รับความปลอดภัยในทุกขั้นตอนของการผ่าตัด นับเป็นบุคคลที่ผ่านการเตรียมการและมีเอกสารรับรอง แต่ไม่ได้รับการกักยับยั้งในการผ่าตัด นอกจากนี้จะให้การสนับสนุนการให้บริการทางคลินิกของผู้ป่วยที่มีการผ่าตัดปากและฟันไหล่จมูกศีรษานิทรรศ เพื่อป้องกันการลุกاجتماعต่อไป

วัตถุประสงค์: เพื่อกำหนดปัญหาทางคลินิกที่พบและน้ำหนักของห้องคัด โรงพยาบาลศิริราช

วัตถุประสงค์: การศึกษาข้อมูลการดำเนินงาน (descriptive research) เพื่อกำหนดปัญหาทางคลินิกในการดูแลผู้ป่วยปากและฟันไหล่จมูกศีรษานิทรรศ ที่คัดในห้องคัด เพื่อให้การจัดเก็บข้อมูลขั้นตอนการให้บริการในมุมมองของผู้ให้บริการ ให้ประโยชน์ในการกำหนดทิศทางของศูนย์ด้านทันตแพทย์ อนาคตในการผ่าตัด สุขภาพของผู้ป่วย (cohort study) และการจัดเก็บข้อมูลทางคลินิกของ the center for advance nursing practice model จากการควบคุม 4 การ ดังนี้ 1) การควบคุมที่เกิดจากการปฏิบัติงาน (practice triggers) โดยพยายามรวมข้อมูลของผู้ป่วยที่ได้ทำการผ่าตัด 30 ราย เพื่อให้รายงานทุ่นระเบียบการผ่าตัดในผู้ป่วยปากและฟันไหล่จมูกศีรษานิทรรศ 2) จากการสอบถามผู้ป่วยและครอบครัวในเวลาการรักษาทางคลินิก ที่คัดในห้องคัด 3) การสำรวจความคิดเห็นของพยาบาล ที่ผ่านการดูแลผู้ป่วยปากและฟันไหล่จมูกศีรษานิทรรศ โดยข้อมูลจากเอกสารที่ทำการสัมภาษณ์ผู้ป่วยผู้ป่วย 4) การให้ความรู้แก่พยาบาล (knowledge triggers) โดยการข้อมูลงานที่เกี่ยวข้องเกี่ยวกับการศึกษา 1 ปี เก็บรวบรวมข้อมูลเป็นเวลา 8 เดือน (เดือนมีนาคม พ.ศ. 2558 ถึงเดือนกุมภาพันธ์ พ.ศ. 2559) วิเคราะห์ข้อมูลชิ้นเรียบตามโดยใช้สถิติราคาและข้อมูลเชิงคุณภาพโดยใช้เนื้อหา (content analysis) เพื่อตอบคำถามวิจัย ตรวจสอบความถูกต้องในการศึกษามูลโดยตรวจสอบผลลัพธ์ของข้อมูลปัจจุบันที่มี

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ผลการศึกษา: แบ่งออกเป็น 4 ด้าน คือ 1) ตัวอย่างสุทธิในพบ 17 ปุ่มที่เจริญการติดต่อเริ่มจัดอยู่ในปัจจุบันและพยากรณ์
รวมทั้งหมดได้รับการติดต่อจำนวน 4 ราย เท่ากัน (ร้อยละ 40) และไม่ได้รับการติดต่อแล้วเจริญพยากรณ์ 2 ราย (ร้อยละ 20) เป็นเพศชาย 6 ราย
(ร้อยละ 60) เพศหญิงจำนวน 4 ราย (ร้อยละ 40) อายุเฉลี่ยอยู่ใน 50 ปี มากที่สุด 4 ราย (ร้อยละ 40)
จะประมทศ่ามากที่สุด 4 ราย (ร้อยละ 40) อายุที่บ้านและเป็นผู้มีอาการที่สุดมากถึง 10 ราย (ร้อยละ 10)
3) ด้านการรักษาและการคัดกรองของโรค 4) ต้นทางการติดต่อและพยากรณ์การเจริญพยากรณ์ ที่พบ

สรุป: การติดต่อปัญหาทางคลินิกที่พบการติดต่ออยู่ในปัจจุบันและพยากรณ์ 3 ชั่วโมง คือ 1) วิถีการรักษา กล่าวถึงการจัดการ
และการควบคุม 2) การควบคุมช่วงต่างๆ เช่น ตั้งใจดูแลตนเองด้วยอาศัยการเจริญพยากรณ์ แผนที่ตั้งใจดูแลตนเอง
(hypotermia) ดูแลตัวเองดี รักษาตนเองจากอาการเจริญพยากรณ์ และแผนที่ตั้งใจดูแลตนเอง