

The Study of care for Patients with Cleft Lip-Palate in Champasak, Lao People's Democratic Republic

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Background: Cleft lips and palates (CLP) are congenital craniofacial deformities that require long-term care and a rehabilitation plan for patients from antenatal care until late into the teenage. The assessment and care for this group of patients involve a multidisciplinary team that coordinates the care. In order to exchange and propagate knowledge, the Tawanchai Center, therefore, has joined with Lao People's Democratic Republic (Lao PDR) in providing antenatal care, surgery and management for the patients with CLP.

Objective: To evaluate the project satisfaction, to assess knowledge of multidisciplinary team, and to explore problems to find out solutions in caring for the patients with CLP

Material and Method: A retrospective study was conducted from the workshops held between 11th and 14th November 2014 in Champasak, Lao PDR. The data were collected using questionnaire and analyzed the information from 10 different provincial hospitals, based on the results of the 65 participants. The data were collected between January and April 2016 and analyzed using percentage and mean.

Results: The response rate was 78.46% (n = 51). The surgeons, anaesthesiologists/nursing anesthesiologists and nurses had a moderate level of knowledge in caring for the patients with CLP (\bar{X} = 3.02, 3.03 and 2.46). Problems and solutions included lack of surgical tools and specialized personnel. The participants expressed their needs on support from the government in training abroad and the Tawanchai Center and the Smile Train in providing additional training. The participants' satisfaction with the project was high to highest (100%).

Conclusion: The surgeons, anesthesiologist/nursing anesthesiologist and nurses of Lao PDR had potential to develop knowledge in caring for the patients with CLP, but the lack of surgical tools and standard of medical education cause long-term development. So, the government had to set up a policy to support funding for a health care system.

Keywords: Cleft lips and palate, Champasak district, The Lao People's Democratic Republic, Tawanchai Center

J Med Assoc Thai 2017; 100 (Suppl. 6): S24-S29

Full text. e-Journal: <http://www.jmatonline.com>

Cleft lip and palate (CLP) are common group of craniofacial birth defects. The prevalence of CLP in Thailand is approximately 1.62 per 1,000 births⁽¹⁾. In particular, in the Northeast, 2.49 cases per 1,000 births are found⁽²⁾. In Europe, there is one incidence per 500 to 700 births⁽³⁾. In the US, 7.75 cases per 10,000 live births and in other countries 7.94 per 10,000 births were reported⁽⁴⁾. Patients with CLP require long-term care plan from antenatal care into late teenage. The care for this group of patients needs a multidisciplinary team,

inclusive of but not excluding surgeons, pediatricians, speech pathologists, audiologists, otolaryngologists, geneticists, dentists, orthodontists, specialized nurses, general nurses, psychologists, and social workers⁽⁵⁾. In the Greater Mekong Sub-region, especially the Lao PDR is one of the developing countries and a neighboring country of Thailand with a culture, language and lifestyle similar to the people living in the Northeastern Thailand. Under the policies of ASEAN, Thailand and Khon Kaen University in cooperation in assisting other Mekong countries in providing continuous care for those with CLP. Due to various reasons, such as economy, knowledge and ability of individuals, living conditions, technology issues and lack of infrastructures, the Lao PDR struggles to provide adequate care for the patients with CLP. The incidence

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and prevalence of CLP in the Lao PDR are 24.76 per 1,000 births⁽⁶⁾.

Based on the evidence stated earlier, a multidisciplinary team of the Tawanchai Center, Faculty of Medicine, Faculty of Dentistry, Khon Kaen University has cooperated academically with Lao PDR in exchange knowledge and experiences by demonstration about induction, pre-operative anesthesia, surgery and pre-postoperative care for the patients with CLP. In addition, assessment of the participants regarding their knowledge gained after the project, problems and solutions and evaluation of the overall project were conducted in order to ensure that those who were providing care for the patients with CLP were able to translate their knowledge into practice in the context of the Lao PDR.

Objective

To evaluate the project satisfaction, to assess knowledge of multidisciplinary team, and to explore problems to find out solutions in caring for the patients with CLP

Material and Method

A retrospective mixed methods study was conducted based on the workshops held between 11th and 14th November 2014 in Champasak, Lao PDR. For material, the research used questionnaire to evaluate knowledge and understanding of doctors and nurses in Lao PDR, as well as the project satisfaction. The data were analyzed through the 65 participants from 10 different hospitals, including: 1) Champasak District Hospital; 2) Mahosot Hospital; 3) Luang Namtha District Hospital; 4) Xiangkang District Hospital; 5) Children Hospital; 6) Udomsri Hospital; 7) Salavan District Hospital; 8) Bolikhamxai District Hospital; 9) Khammouan District Hospital; and 10) Savannakhet District Hospital.

The data were collected between January and

April 2016 and analyzed using percentage and mean for quantitative data and content analyses for qualitative data.

Results

The response rate was 78.46% (51 persons). The surgeons, anesthesiologists, nursing anesthesiologists and nurses had a moderate level of knowledge in caring for the patients with CLP (\bar{x} = 3.02, 3.03 and 2.46) (Table 1).

This present study explored healthcare services for the patients with CLP provided by the surgeon in Lao PDR which found that 100% of the surgeons were male. For training in caring of the patients with CLP at the Tawanchai Center, Srinagarind Hospital, Faculty of Medicine, Khon Kaen University, the results found that the majority of the surgeons had attended the training (81.8%) and almost three fourth (72.7%) had attended the training only once. The highest numbers of surgeries performed for the patient with CLP by the individual participating surgeon was 730 cases (9.1%). The fund in caring for the patient with CLP was received mainly from the Smile Train (72.7%). The majority of the participants reported that their working place did not have specific units or centers that provide care specifically for the patients with CLP (81.8%) and all participants reported having insufficient healthcare personnel in providing care for the patients with CLP (100%). In addition, two-thirds of the participants (63.6%) were not sure if they knew what multidisciplinary care team was (Table 2).

In terms of qualitative data, it was found that problems in caring for patients with cleft palate included insufficient surgical instruments and specialists such as orthodontist, speech pathologist team. The participants needed support for overseas training from the government or international agencies. In addition, the participants reported that they needed the Smile Train and Tawanchai Center to provide more training

Table 1. The participating doctors and nurses' mean knowledge scores in caring of the patients with cleft lips and palate (n = 51)

Knowledge scores in caring of the patients with cleft lips and palate	Mean (\bar{X})
Surgeons (n = 28)	3.02
Anaesthesiologists and nursing anaesthesiologists (n = 11)	3.03
Nurses (n = 12)	2.46

Note: The evaluation was categorized into three levels according to the following scale: 0 – 1.66 = Low, 1.67 – 3.32 = Moderate, and 3.33 – 5.00 = High

Table 2. Healthcare services provided for the patients with cleft lip and palate by the participating surgeons in Lao PDR (n = 28)

Characteristics	Percentage
Gender	
Male	100
Had attended the training in caring for the patients with CLP provided by the Tawanchai Center, Srinagarind hospital, Faculty of Medicine, KhonKaen University	
Yes	81.8
No	18.2
Numbers of training	
1	72.7
2	9.1
3	9.1
Could not specify	9.1
Experience of operation (n = 11)	
Never	27.2 (3)
2 cases, 10 cases, 40 cases, 55 cases, 130 cases, 300 cases, 450 cases, 730 cases.	72.8 (8)
Organization provided fund for caring the patient with CLP	
Smile Train	72.7
Smile Train/KOICK	9.1
Smile Train/Tawanchai	9.1
Smile Train/Women International Group (WIG)	9.1
Working place had units or centers in caring specifically for patients with CLP	
Yes	18.2
No	81.8
Had sufficient health care personnel in caring for the patients with CLP	
Yes	0
No	100
Understanding the meaning of a multidisciplinary care team	
Yes	18.2
Not sure	63.6
No	18.2

in order to implement the knowledge into the practice and gain more knowledge in caring for pre-post operation and the patient follow-ups.

This present study also found that a small number of the nurses used to practice breastfeeding on the patients with CLP (8.3%). After the training, more than half had gained their knowledge at a very high level (58.3%). All nurses reported that they had never practiced on bottle feeding in the patients with CLP (100%). However, after the training, the majority had gained knowledge at a moderate level (83.3%) (Table 3).

For qualitative data, the present study found that the nurses needed training from the Tawanchai Center about breastfeeding on the patients with CLP because they were not trained for these skills before.

In regard to care provided by anesthesiologists and nursing anesthesiologists for the patient with

CLP in Lao PDR, the present study found that the participants were male (78%), anesthesiologists (67%), had equal work experience for 1 to 20 years (11%), had experience in providing child anesthesia (11%), had moderate confidence, the availability and capability of their hospital in providing child anesthesia and in providing for the patients with CLP (66.7%). (Table 4).

The qualitative data revealed problems in regard to care for the patient with CLP, included shortage of specialists, insufficient surgical tools and shortage of funds for the staff's academic promotion and development.

The present study had also explored three scrub nurses who provided services for the patients with CLP in Lao PDR. The results found that for those hospitals with scrub nurses, they would have a large numbers of hospital beds up to 250 beds (33.3%), the number of operation room was 2-5 rooms, years worked

Table 3. The nurses' practices on feeding for the patients with cleft lip and palate (n = 12)

Characteristics	Percentage
Had trained on bottle feeding for the patient with CLP	
Yes	-
Never	100
Had trained in breastfeeding for the patient with CLP	
Yes	8.3
Moderate	16.7
Never	75
Level of knowledge gained after the training on bottle feeding for the patients with CLP	
High	8.3
Moderate	83.4
Low	8.3
Level of knowledge gained after the training in breastfeeding for the patients with CLP	
High	58.3
Moderate	41.7

Table 4. The anaesthesiologist/nurses anaesthesiologist care for patients with CLP (n = 9)

Characteristics	Percentage
Gender	
Male	78 (7)
Female	22 (2)
Position	
Anesthesiologist	67 (6)
Nurses anaesthesiologist	33 (3)
Experience of induction	
Had experience	11 (1)
Never	89 (8)
Confidence for induction	
High	22 (2)
Moderate	67 (6)
Low	11 (1)
Capability of their hospital in providing child anesthesia	
Yes	66.7 (6)
No	33.3 (3)

in operation room ranged from 6-15 years, had trained in surgical services for the patients with CLP (66.7%), had serviced in the surgical field for the patients with CLP (33.3%), and had patient records and a register of surgical patients in their hospital (100%).

For qualitative data, the scrub nurses needed to enhance their long-term knowledge and skills through the Tawanchai Center and Smile Train, needed surgical instrument such as Dingman retractor and antiseptic solution for surgical tools, and wished for the government to increase working allowance.

For the overall project satisfaction, the present

study found that the participating doctors and nurses were satisfied with the project in high to highest level (100%).

Discussion

This present study showed that the surgeon, anesthesiologist/nurse anaesthesiologist and nurse had a moderate level of knowledge in caring for the patients with CLP. This is similar to the study of Pradubwong et al⁽⁷⁾, in which the study found that in the year 2010, knowledge in caring for patients with CLP of Lao PDR care team were in moderate level. Therefore, the

Tawanchai Center and Smile Train have continuously organized workshops and training for Lao PDR team in order to enhance knowledge and skills. However, there may be other factors that can assist the team in gaining their knowledge such as specific training.

In this present study, it was found that problems in caring for the patients with CLP were lack of surgical instruments and specialists such as orthodontist and speech pathologist teams. There is a need for participants to train overseas, which required government or international agencies support. In addition, the participants reported that they needed the Smile Train and Tawanchai Center to provide more training. This is consistent with the study of Pradubwong et al⁽⁷⁾, in which the study found that the problem of care for patients with CLP in Lao PDR is lack of health personnel, specialists, surgical instrument and knowledge. The suggestion is to seek help from the government and overseas organizations in various fields, as well as having academic visits to both locally and internationally. These results are also similar to the study of Prathanee⁽⁸⁾, in which the study found that Asian countries lack speech-language pathologists. The solution is to provide training for health provider in community to be able to train the child with CLP under the continuous supervision, monitoring and suggestion by the speech-language pathologists.

Conclusion

The surgeons, anesthesiologist/nursing, anesthesiologists and nurses of Lao PDR had potential to develop knowledge in caring for the patients with CLP, but the lack of surgical tools and standard of medical education cause long-term development. So, the government has to set up a policy to support funding for a health care system.

What is already known on this topic?

In Lao PDR, the surgeon, anesthesiologist and nurse anesthesiologist had a moderate level of knowledge in caring for the patients with CLP. In addition, a number of specialists and surgical instruments are not sufficient. Therefore, there is a need for government support in training abroad.

What this study adds?

A small number of the participating nurses in Lao PDR had trained for breastfeeding for the patients with CLP (8.3%) and none had any experience on bottle feeding, whilst only one- third of the participating scrub

nurses had experience in providing surgical services for the patients with CLP (33.3%).

Acknowledgements

This study was supported by the Center of Cleft Lip-Cleft Palate and Craniofacial Deformities, Khon Kaen University under Tawanchai Royal Grant Project (Tawanchai Center). Many thanks to the Lao PDR volunteers, Bureau of Academic Service, Khon Kaen University for funding support, and the multidisciplinary team of Tawanchai Center for their participation.

Potential conflicts of interest

None.

References

1. Chuangsuwanich A, Aojanepong C, Muangsombut S, Tongpiew P. Epidemiology of cleft lip and palate in Thailand. *Ann Plast Surg* 1998; 41: 7-10.
2. Ruangsitt C, Prasertsang P, Banpho Y, Lamduan W, Giathamnuay S, Nuwantha A. Incidence of cleft lip and palate in three hospitals in Khon Kaen. Khon Kaen: Department of Orthodontics, Faculty of Dentistry, Khon Kaen University; 1993.
3. Shaw WC, Semb G, Nelson P, Brattstrom V, Molsted K, Pahl-Andersen B, et al. The Eurocleft project 1996-2000: overview. *J Craniomaxillofac Surg* 2001; 29: 131-40.
4. Tanaka SA, Mahabir RC, Jupiter DC, Menezes JM. Updating the epidemiology of cleft lip with or without cleft palate. *Plast Reconstr Surg* 2012; 129: 511e-8e.
5. Kasten EF, Schmidt SP, Zickler CF, Berner E, Damian LA, Christian GM, et al. Team care of the patient with cleft lip and palate. *Curr Probl Pediatr Adolesc Health Care* 2008; 38: 138-58.
6. Central Intelligence Agency. The World factbook [Internet]. 2014 [cited 2017 Jan 20]. Available from: <http://bit.ly/1WQMOTZ>.
7. Pradubwong S, Mongkholtawornchai S, Pethcharat T, Keopadapsy KS, Chowchuen B. Study of care for patients with cleft lip/palate (CLP) in the Lao People's Democratic Republic: health provider's perspective. *J Med Assoc Thai* 2011; 94 (Suppl 6): S79-84.
8. Prathanee B. Development of speech services for people with cleft palate in Thailand: lack of professionals. *J Med Assoc Thai* 2012; 95 (Suppl 11): S80-7.

การศึกษาการดูแลผู้ที่มีภาวะปากแห้งเพดานโหว่ในแขวงจำปาสัก สาธารณรัฐประชาธิปไตยประชาชนลาว

สุธีรา ประดับวงษ์, ศิริพร มงคลถาวรชัย, พรเพ็ญ ประทุมวิวัฒนา, ดาราวรรณ อักษรวรรณ, เสาวลักษณ์ ธีรรัตนพงษ์, วรรณญา สร้อยหิน, กิ่งกาญจน์ โคตรพัฒน์, ปิยะพร บุญแสงเจริญ, ยุธิดา ชัยกรี้, นที มณีวรรณ, พลากร สุรกุลประภา, บวรศิลป์ เขาวนชื่น

ภูมิหลัง: ภาวะปากแห้งเพดานโหว่เป็นความพิการแต่กำเนิดของศีรษะและใบหน้า การดูแลรักษาฟื้นฟูสภาพผู้ป่วยต้องมีการวางแผนระยะยาวตั้งแต่ระยะก่อนตั้งครรภ์จนกระทั่งคลอด ตลอดจนมีการเจริญเติบโตของใบหน้าโดยสมบูรณ์ การประเมินและดูแลผู้ป่วยกลุ่มนี้ประกอบด้วยทีมสหวิทยาการที่ร่วมกันดูแลรักษา ดังนั้นเพื่อเป็นการแลกเปลี่ยนและเผยแพร่องค์ความรู้ ทีมสหวิทยาการของศูนย์ศัลยกรรมใบหน้าจึงเข้าร่วมเป็นวิทยากรการดูแลรักษาและผ่าตัดแก้ไขโรงพยาบาลต่างๆ ใน สปป. ลาว

วัตถุประสงค์:

- 1) เพื่อประเมินผลความรู้ของทีมผู้รักษาในด้านการผ่าตัด การนำสลับ การพยาบาลในการดูแลผู้ป่วย ปากแห้งเพดานโหว่ของสปป.ลาว
- 2) เพื่อศึกษาปัญหาและแนวทางแก้ไขของการดูแลผู้ป่วยปากแห้งเพดานโหว่ของสปป.ลาว
- 3) เพื่อประเมินผลความพึงพอใจในการจัดโครงการ

วัสดุและวิธีการ: การศึกษาเชิงปริมาณและเชิงคุณภาพแบบย้อนหลังของการจัดประชุมเชิงปฏิบัติการ ณ โรงพยาบาลแขวงจำปาสัก สาธารณรัฐประชาธิปไตยประชาชนลาว ระหว่างวันที่ 11 ถึง 14 พฤศจิกายน พ.ศ. 2557 ซึ่งศึกษาจากแบบประเมินของผู้เข้าร่วมโครงการ ในโรงพยาบาลแขวงต่างๆ 10 แห่ง จำนวน 65 คน ใช้เวลารวบรวม ข้อมูล 4 เดือน (มกราคม ถึง เมษายน พ.ศ. 2559) วิเคราะห์ข้อมูลใช้สถิติร้อยละและค่าเฉลี่ย

ผลการศึกษา: ผู้ตอบแบบประเมินจำนวน 51 คน คิดเป็นร้อยละ 78.46 พบว่าด้านความรู้ความเข้าใจในการดูแล ผู้ปากแห้งเพดานโหว่ของศัลยแพทย์, วัสดุอุปกรณ์/วัสดุอุปกรณ์พยาบาล และพยาบาลอยู่ในระดับปานกลาง ($\bar{x} = 3.02, 3.03$ และ 2.46) ปัญหาและแนวทางแก้ไข คือ เครื่องมือการผ่าตัดไม่เพียงพอ ไม่มีบุคลากรเฉพาะด้าน อยากให้รัฐบาลช่วยสนับสนุนในการไปฝึกอบรมที่ต่างประเทศ ต้องการให้ศูนย์ศัลยกรรมและ Smile Train ช่วยเหลือและฝึกอบรมเพิ่มเติม ด้านความพึงพอใจในการจัดโครงการ ภาพรวมอยู่ในระดับดีมาก ถึง มากที่สุด ร้อยละ 100

สรุป: ศัลยแพทย์, วัสดุอุปกรณ์/วัสดุอุปกรณ์พยาบาลและพยาบาลมีศักยภาพที่จะพัฒนาความรู้ความเข้าใจ ในการดูแลผู้ป่วยปากแห้งเพดานโหว่ได้ แต่การขาดเครื่องมือผ่าตัด และปัญหามาตรฐานการศึกษาทางการแพทย์ ทำให้ต้องใช้เวลาในการพัฒนา ดังนั้นรัฐบาลควรมีนโยบายด้านสุขภาพและสนับสนุนทุนทรัพย์ร่วมด้วย
