CLINICAL FEATURES OF PATIENTS WITH CLEFT LIP AND PALATE TREATED AT HUE UNIVERSITY HOSPITAL IN COLLABORATION WITH CHONBUK NATIONAL UNIVERSITY, KOREA

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Abstract

Objectives: To study the clinical features of patients with cleft lip and palate treated at Hue University Hospital in collaboration with Chonbuk National University, Korea. **Method:** A descriptive, prospective research of 192 patients with cleft lip and palate from 2006 to 2014, at Hue University Hospital. **Results:** Majority of patients was male (1.5/1), 1-15 year old (75%), at Thua Thien-Hue (67.19%) and in rural areas (79.69%). Cleft lip: 43.75%; Cleft palate: 54.61%; Left - right 6.25. 4 cases of rare cleft (Franceschetti syndrome), including one case with ratio cleft of lower lip, ear deformity and ankyloglossia. **Conclusion:** Clinical feature of patients with cleft lip and palate was very diverse. There were 4 cases of rare cleft (Franceschetti syndrome), including one case with middle cleft of lower lip, ear deformity and ankyloglossia.

Key words: *Cleft lip and palate, Franceschetti syndrome, cleft of lower lip, ankyloglossia.*

1. INTRODUCTION

Congenital malformation at oro-facial region is a fairly common disease, the highest proportion in the general categories of body malformations, including mostly cleft lip - palate, representing a rate of about 1 ‰ [3]. It causes deformitiesy the face and psychological, aesthetic and function problems of children, Multi-disciplinary cleft treatment required coordination of multiple specialties such as Pediatrics, Oro-facial Plastic Surgery, Speech training, Orthodontics, ENT and must be proceed ed in a continuos process since birth, until adolescence.

Wishing to contribute a little in return is smiles to children with disabilities, Hue Faculty of Odonto-Stomatology in collaboration with relevant organizations and departments, particularly ENT Department and OGCDC (Organization of Genetic Counselling Disabled Children) of Hue University of Medicine and Pharmacy Hospital; simultaneously, enlisted international cooperation to gradually improve the therapeutic effect; which, with the cooperation of Chonbuk National University (CNU), Korea for 9 years.

2. SUBJECTS AND METHODS

2.1. Subjects

Subjects including 192 patients with congenital malformations at oro-facial region, treated at Hue University of Medicine Hospital in collaboration with Chonbuk National University-Korea, from 2006 to 2014.

- Criteria for selecting patients: age ≥ 3 months old, weighing ≥ 6 kg and should Hb ≥ 10 g / dl.

2.2. Research methodology

2.2.1. Methods

A prospective descriptive study.

2.2.2. The research targets

2.2.2.1. General features

- Sex: male, female

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- Age: ≤ 6 months, 7-11 months, 1-15 years, > 15 years old.

- Residence: North Central, South Central, North

- Location: urban, rural.

- General classification of cleft (according to Mai Dinh Hung, Nguyen Khac Giang [3]): + Cleft lip (CL): cleft lip simply, CL coordinated gnatho schisis, CL coordinated cleft palate (through/non through).

+ Cleft palate (CP): Hard CP, soft CP.

+ Rare clefts: Franceschetti syndrome; middle cleft of lower lip, ear deformity, ankyloglossia…

2.2.2.2. Clinical features

- Classification of cleft lips (according to Mai Dinh Hung, Nguyen Khac Giang [3]):

+ Cleft upper lip (CUL) simply, CUL coordinated (Gnatho schisis, cleft palate).

+ Cleft lower lip (CLL) simply, CLL coordinated (Franceschetti syndrome, ear deformity and ankyloglossia).

- Classification of cleft palate (CP) (according to Mai Dinh Hung, Nguyen Khac Giang [3]): cleft hard palate, cleft soft palate.

- Side and degree of cleft lip simply:

+ The side of cleft lips: left, right, bilateral

+ The degree of cleft lips: complete, not complete

- Side and degree of cleft lip coordinated gnatho schisis:

+ The side: left, right, bilateral.

+ The degree: complete, not complete.

- Side and degree of cleft lip coordinated cleft palate:

+ The side: left, right, bilateral.

+ The degree: complete (cleft of hard and soft palate): through; Soft cleft palate, not complete (1^{st} , 2^{nd} degree): not through.

- Side and degree of cleft palate: cleft of hard and soft palate:

+ The side: left, right, bilateral.

+ The degree: complete; not complete (1^{st}, 2^{nd} degree).

- Side and degree of cleft soft palate:

+ The side: left, right, bilateral.

+ The degree: complete; not complete (1^{st} , 2^{nd} degree).

- Rare clefts: Middle cleft of lower lip, middle cleft of upper lip, microsomia (Franceschetti syndrome), facial oblique cleft (Coloboma).

- Other malformations: Lip hemangioma, palate teratoma, ankyloglossia, ear deformity, nose deformity, occular hyperthelorismus, fetal face, four breasts, ectopic testis, syndactilia, hypodactylia, polydactylia , bad scars of lip and of face...

2.2.3. Data processing: SPSS 18.0 software

3. RESULTS AND DISCUSSION

3.1. General features

3.1.1. Distribution by sex

- Male: 115 account for 59.74%; female: 77; 40.26%. The proportion of male / female: 1.5 /1 - Nguyen Van Tan (2013): 1.5 / 1 [7]; Nguyen Van Minh (2009): 1.7 / 1 [5]; Le Van Trang (2007): 1.3 / 1 [9]. Mai Dinh Hung (1972): 1.2 / 1 [2].

- Mai Dinh Hung, Nguyen Khac Giang (1979): over 1477 cases from 1957-1974, male account for 56.5%, female 43.5%. Scale: 1.3 / 1 [3]. Similar to the results of Nguyen Hong Loi (2006) [4], Tran Thanh Phuoc (2003) [6], Nguyen Chi Thanh (2003) [8]. - Wantia Nina (2002): 1.4 / 1 [19]; Rosenthal: 3/2 [3]; Thomson H.G (1995): 1.5 / 1 [18]; Becker M. (1998) [11], German O.P (1986): 1.5 / 1 [15].

3.1.2. Surgical age

- ≤ 6 months: 8.85%; 7-11 months: 10.42%. Thus, <1 year: 19.27%; while the smallest is 3.5 months. Le Duc Tuan (2004): 32.2% [10], Le Van Trang (2007): 72.9% [9], Nguyen Van Minh (2009): 80% [5]. According to Nguyen Van Tan (2013): 92.1%; of which, account for 60.5% ≤ 6 months; 7-11 months account for 31.6% [7]. Our patients were operated later.

- 1-15 years: 75%; > 15 years: 5.73%. Thus, account for 79.1% ≥ 1 year old; of which the largest was 35 years old. Nguyen Van Tan: children ≥ 1 year of age account for 7.9% [7]. - According to Becker M. (1998), the average age is 4.6 months [11], the same Bernard J.C (2004) [12], Cheryl Cermin (2003) [13], Clark J. M (2003) [14], Milton T. E (1972) [17]. While Hedrick M. H (1996), surgery is in the neonatal period [16].

3.1.3. Residence

- North Central (90.62%): Thua Thien Hue:

67.19%, Quang Tri, Quang Binh: 23.43%; Thanh Hoa is the farthest.

- South Central (7.3%): mainly from Quang Nam-Da Nang and Quang Ngai; Binh Thuan is the farthest.

- North (2.08%): Quang Ninh.

3.1.4. Location

153 patients in rural areas (79.69%); Urban: 39; account for 20.31%.

3.1.5. Cleft classification

3.1.5.1. General classification of cleft (n=192)

- Cleft lip (CL): 84 cases, 43.75%; including:

+ Cleft lip simply: 35 cases, account for 18.23%

+ CL coordinated: 49 cases, 25.52%; including: CL coordinated gnatho schisis: 6 cases, CL coordinated cleft palate 43 cases (through: 42/ non through: 1).

- Cleft palate (CP): 104 cases, account for 54.16% including:

+ CP (hard and soft palate): 75 cases, account for 39.06%.

+ Soft CP simply: 29 cases, account for 15.10%.

- Rare clefts: 4 cases of Franceschetti syndrome; which including one case with middle cleft of lower lip, ear deformity and ankyloglossia.

3.1.5.2. Classification of cleft lips (n=84)

- Cleft upper lip (CUL):

+ CUL simply: 35, account for 41.67%.

+ CUL coordinated (gnatho schisis, cleft palate): 49, account for 58.33%.

. CUL coordinated gnatho schisis: 6, account for 7.14%.

. CUL coordinated cleft palate: 43, account for 51.19%; through: 42, non through: 1.

- Cleft lower lip (CLL): 1, account for 1.19%, coordinated Franceschetti syndrome, ear deformity and ankyloglossia.

+ Mai Dinh Hung, Nguyen Khac Giang: over 1477 cases in 1957 to 1974, cleft lip coordinated cleft palate account for 54.3% .

+ Truong Manh Dung (2007): 53.6% [1], Nguyen Hong Loi (2006): 50.5% [4], Nguyen Van Tan (2013): Cleft upper lip simply: 44.7 %; coordinated cleft palate: 55.3% [7]. Nguyen Chi Thanh (2003): 57% [8], Le Van Trang (2007): 52.9% [9].

+ Arosanera (2007): 68%. Koch (1968): in 5316 cases, 43%; Bulatopskaia (1964), over 741 cases, account for 44.2% [3], Wantia Nina (2002): 65% [19].

3.1.5.3. Cleft palate classification (n=104)

Cleft palate (hard and soft): 75 cases, account 72.12%. Soft palate clefts: 29 cases, account for 27.88%. Cleft palate 2.6 times soft palate cleft.

3.2. Clinical features

3.2.1. Side and degree of cleft upper lip simply (n=35)

- The complete cleft lip: 28 cases, account for 80%; not complete: 6 cases of 2nd degree, account for 21.43%; 1 case of 1st degree, account for 2.86%. According Bethman in Thallwitz (1964) and Burian in Prague in 1966, the 1st and 2nd degree are not complete and 3rd degree is complete); Same comment of Mai Dinh Hung, Nguyen Khac Giang, Rosenthal, Veau and Herfert, the most common of cleft lip simply is complete [3].

- Left cleft lip: 25 cases (71.43%) 6.25 times right (4 cases, 11.4%); 6 cases of cleft both sides (bilateral) account for 18.8%. Unilateral cleft lips occupied: 29 cases, account for 82.86%, 4.83 times bilateral cleft lips (6 cases, 17.14%), similar remarks of Mai Dinh Hung, Nguyen Khac Giang, every 4 cases of unilateral cleft lip there is 1 case of bilateral cleft lip [3].
- According to Nguyen Van Tan (2013), left cleft lip with 73.7% majority almost 3 times higher than the right cleft lip (26.3%) [7]. Le Van Trang (2007): 69.4 / 30.6 [9]; Nguyen Van Minh (2009): 77:23 [5]. H.G Thomson (1995): 71/29 [18]; Becker M (1998): 56/44 [11].
- By Mai Dinh Hung, Nguyen Khac Giang, on average 1207 cases, left cleft lip is 2.5 times the right one. Koch: a similar rate in 3493 cases in Thallwitz [3].

- Mai Dinh Hung (1972), over 1697 cases, the proportion of left / right is 69.6 / 30.4 [2].

3.2.2. Side and degree of cleft upper lip coordinated gnatho schisis (n=6)

- 6 cases, in which, 4 cases complete, 1 case of 1st degree, 1 case of 2nd degree; Left side: 5 cases, 1 case of right.

- Mai Dinh Hung, Nguyen Khac Giang: over

1477 cases treated at Vietnam-Germany Hospital, from 1957 to 1974, CUL coordinated gnatho schisis was majority (43%.) [3].

3.2.3. Side and degree of cleft lip-palate (n=43)

- Left: 31 cases (72.09%), right: 5 cases (11.63%), bilateral: 7 cases (16.28%).

- Type cross (was through according to Mai Dinh Hung, Nguyen Khac Giang [3]): 42 cases, account for 97.67%; 1 case non through (2.23%).

3.2.4. Side and degree of cleft palate (hard and soft palate) (n=75)

- Left: 60 cases (80%); right: 5 cases (6.67%); bilateral: 10 cases (13.33%).

- Most of the complete: 71 cases (94.66%); 1st degree: 2 cases (2.67%); 2nd degree: 2 cases (2.67%).

3.2.5. Side and degree of cleft soft palate (n=29)

- Left: 20 cases (68.97%); right: 5 cases (17.24%); bilateral: 4 cases (13.79%).

- Mainly complete: 23 cases (79.31%); 1st degree: 2 cases (6.9%); 2nd degree: 4 cases (13.79%).

3.2.6. Rare clefts (n=4)

- In 192 cases of cleft deformities were treated from 2006 to 2014, recorded 4 cases of microsomia; which, in 1 case included middle cleft of lower lip, ear deformity and ankyloglossia.
- Mai Dinh Hung, Nguyen Khac Giang: Over 1477 cases treated in Vietnam-Germany Hospital from 1957 to 1974, there was only 1 casse of middle cleft of lower lip, 12 cases of microsomia (Franseschetti syndrome). Also, there were 2 cases of cleft upper lip in the middle, 11 cases of facial oblique cleft (Coloboma), 3 cases of malformations in collaboration with others as syndactilia, hypodactylia or polydactylia, ectopic testis, four breasts, fetal face, occular hyperthelorismus [3]; we have not recorded that.

3.2.7. Other diseases (n=49)

- Recorded 10 deformity cases, including 5 cases of ear, 5 cases of nose; 2 cases of hemangioma of lip and face; 37 cases of bad scarring.

- Mai Dinh Hung, Nguyen Khac Giang: Over 1477 cases treated in Vietnam-Germany Hospital from 1957 to 1974, recorded 6 cases of ear malformation, 7 cases of other malformations. In addition, 1 case of palate teratoma [3]. We have not recorded that.

4. CONCLUSION

In 9 years associated with concerned departments Hue University Hospital and the Chonbuk National University- Korea, we recorded the clinical features of patients with cleft lip-palate.

4.1. General characteristics

- Sex: male: 115, account for 59.74%; female: 77, account for 40.26%. Rate male / female: 1.5/1.

- Age: <1 year: 19.27% (≤ 6 months: 8.85%; 7-11 months: 10.42%.), While the smallest was 3.5 months. ≥ 1 year: 70.73% (1-15 years: 75%; > 15 years: 5.73%), of which the oldest was 35 years old.

- Residence: North Central majority (90.62%): Thua Thien Hue: 67.19%, Quang Tri, Quang Binh: 23. 43%; Thanh Hoa was the farthest. South Central (7.3%): mainly from Quang Nam-Da Nang and Quang Ngai; Binh Thuan and Gia Lai were the farthest. North (2.08): Quang Ninh.
- Location: The majority of patients was in rural areas (79.69%), Urban: 39; account for 20.31%.

4.2. General classification of cleft

- Lip cleft: 84 cases, 43.75%; including:

+ Cleft lip (CL): cleft lip simply 35 cases, account for 40%, cleft lower lip 1.2%.

+ CL account 58.8%; primarily CL coordinated cleft palate account for 52.5%; including, most frequent through (41/42 cases). CL coordinated gnatho schisis: 5 cases.

+ 1 case of cleft lower lip coordinated microsomia (Franceschetti syndrome), ear deformity and ankyloglossia.

- Clefts palate: 90 cases, account for 55.5%: in which cleft palate (hard and soft palate), 65 cases, account for 65%; 1.4 times higher than cleft soft palate (25 cases, 35%).

4.3. Clinical features

- Side and degree of cleft lip:

+ Cleft lip the complete account for 78.1%; not complete: 21.9 % (2nd degree: 18.7%; 1st degree: 3.1%)

+ Cleft left lip (71.8%) was 7.8 times right (9.4%). Unilateral (81.2%) was 4 times bilateral (18.8%).

- Side and degree of cleft palate:

+ Clefts left palate the majority (77%)
+ Most of the complete: 96.9%.
- Side and degree of cleft soft palate:
+ Clefts left soft palate the majority (72%)
+ Mainly complete: 84%.
- Rare clefts: 4 rare cases were microsomia (Franceschetti syndrome) including 1 case of middle cleft of lower lip with Franceschetti syndrome, ear deformity and sticky ankyloglossia.
- Other diseases: 8 cases of malformations, including 5 cases of ear, 5 cases of nose; 2 cases of hemangioma of lip and face; 27 cases of bad scarring.

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