

CHAPTER IV

RESULTS

Errors of measurement were assessed using the paired *t*-test. No significant differences between the first and second measurements were found. The error of the method equaled 0.29.

There were seven male and five female subjects in the one-stage closure group and six male and five female subjects in the two-stage closure group. The cleft distribution is shown in Table 8.

Table 8 Distribution of subjects with unilateral cleft lip and palate.

	Male	Female	Total
Right	2	5	7
Left	11	5	16
Total	13	10	23

Anterior and posterior arch widths were not significantly different ($p < 0.05$ in both cases) between the two groups (Figure 12).

There was no statistically significant difference in overjet between one-stage closure and two-stage closure ($p < 0.05$) (Figure 12). Negative or reversed anterior overjet occurred in 10 patients (83.8%) in the one-stage group and in nine patients (81.8%) in the two-stage group. There was an edge to edge relationship in two patients (16.7%) in the one-stage group and in two patients (18.2%) in the two-stage

Group (Figure 13). The mean difference in sagittal overjet between two groups was 1.44 mm (Table 9).

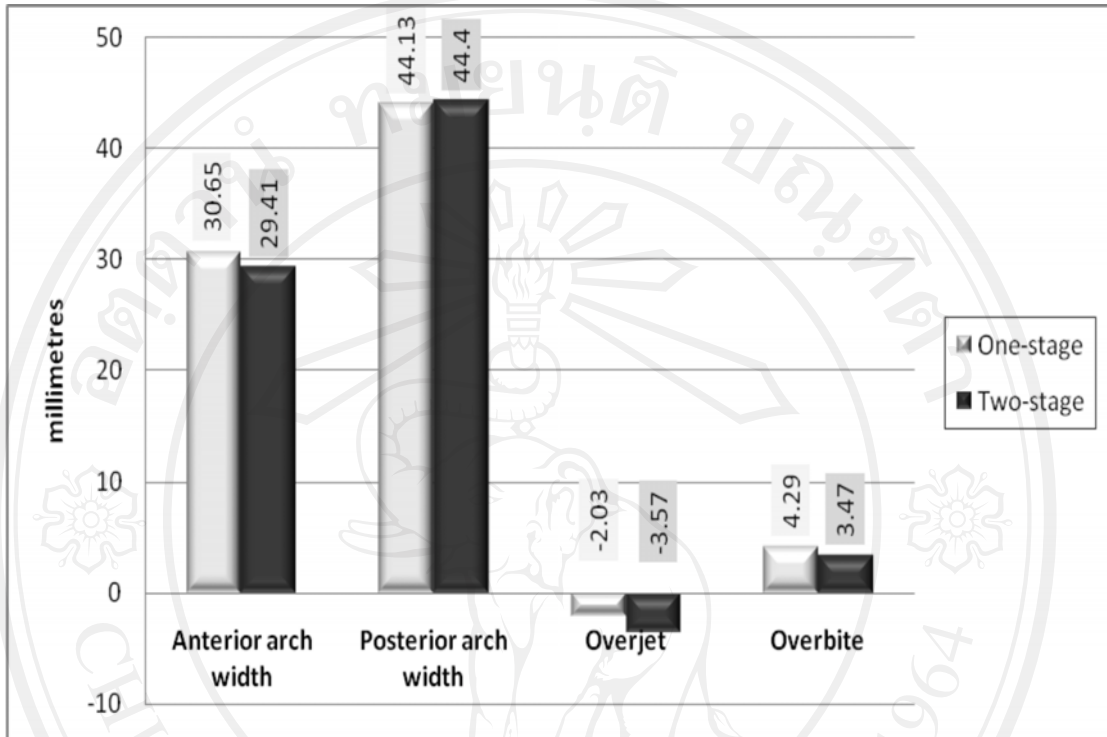


Figure 12 Comparison of anterior arch width, posterior arch width, anterior overjet and anterior overbite: one-stage closure versus two-stage closure

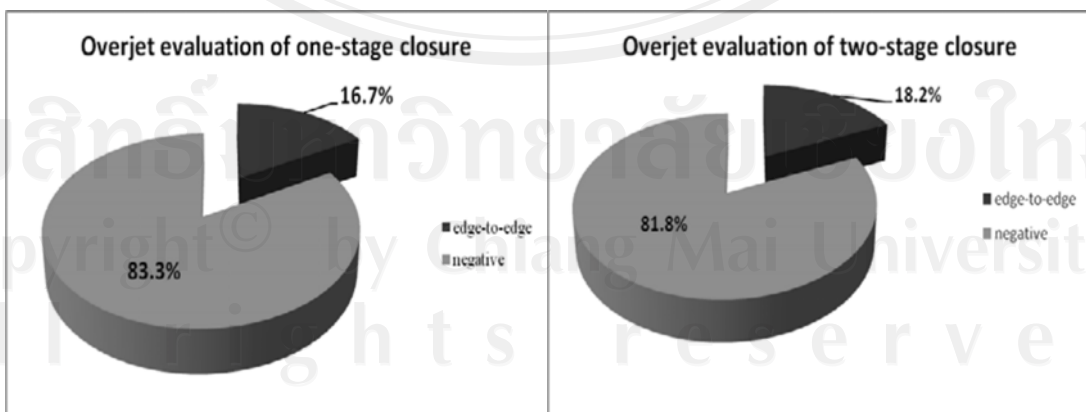


Figure 13 Evaluation of overjet in one-stage and two-stage closures

All subjects except one, who had an edge to edge relationship, in the one-stage group, had positive overbite. The means for anterior overbite in each group are shown in Table 9. The average anterior overbite in the two groups was not significantly different ($p < 0.05$) (Figure 14).

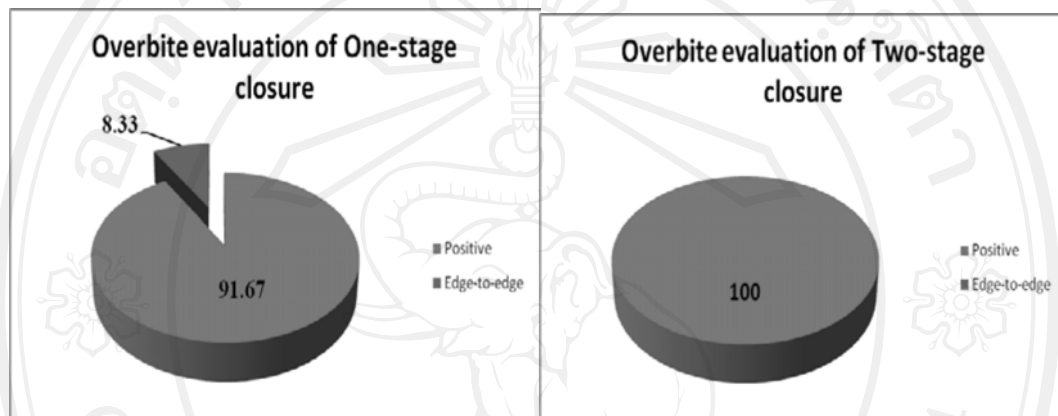


Figure 14 Evaluation of overbite in one-stage and two-stage closures

Table 9 Comparison of dental model measurements in two groups

Measurement and evaluation	Scale	Group 1, Mean (SD)	Group 2, Mean (SD)	Independent t-test	95% Interval of Difference	<i>p</i> value
Anterior arch width	mm	30.65 (4.83)	29.41 (4.31)	NS	-1.82, 5.09	0.338
Posterior arch width	mm	44.13 (4.47)	44.40 (3.40)	NS	-3.52, 3.24	0.931
Anterior overjet	mm	-2.03 (1.50)	-3.57 (2.69)	NS	-2.34, 3.88	0.08
Anterior overbite	mm	4.29 (1.73)	3.47 (2.59)	NS	-1.37, 1.83	0.77

All subjects in two-stage group (11 patients) had anterior crossbite. In one-stage group, nine patients (75%) had anterior crossbite. Ten subjects (83.3%) in the

one-stage group had posterior crossbite and nine subjects (78.6%) in the other group had posterior crossbite. Posterior crossbites in the small lateral jaw segment created by the cleft in both groups occurred more frequently than in the large segment (Table 9). There was no statistically significant difference ($\alpha = 0.05$) in anterior and posterior crossbites between one-stage closure and two-stage closure (Figure 15, Table 11).

Table 10 Comparison of posterior crossbite in small lateral jaw segment and large jaw segment in two-groups

	Small segment (subjects)	Large segment (subjects)
One-stage group	9	5
Two-stage group	11	5

Table 11 Comparison of anterior and posterior crossbites in two groups

Evaluation	Group 1, (percent,N)	Group 2, (percent,N)	Pearson chi- square test	α value
Anterior crossbite	75%, (9)	100%,(11)	NS	0.05
Posterior crossbite	83.3% (10)	78.6%(9)	NS	0.05

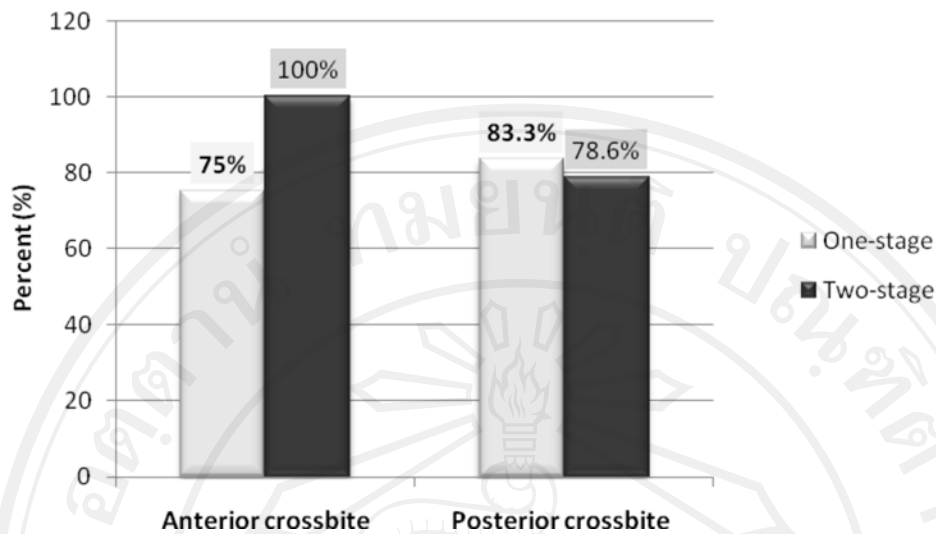


Figure 15 Comparison of anterior and posterior crossbite: One-stage closure versus two-stage closure.

All central incisors (100%) on the cleft side in the one-stage group were in crossbite, whereas 12 patients (85.7%) in the two-stage group presented with anterior crossbite and two patients had an edge to edge relationship. The numbers of teeth in crossbite decreased with tooth type from anterior to posterior in both groups (Figure 16). The number of teeth in crossbite were slightly higher in the two-stage group for canines, first premolars or first deciduous molars and first molars than in the one-stage group. However, the numbers of teeth in crossbite were higher in the one stage group for central incisors and second premolars or second deciduous molars than in the two-stage group (Figure 16).

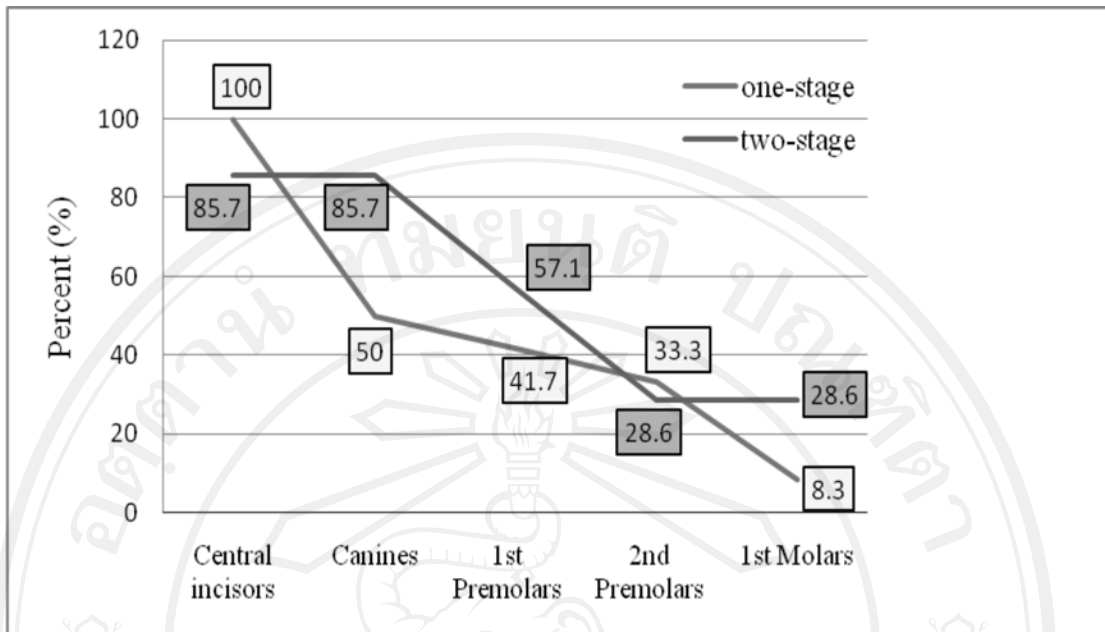


Figure 16 Comparison of crossbite in each tooth between one-stage and two-stage closure