

Table 4. Comparison of Salivaster Bld test scores at each observation week

Group		Before	1 W	2 W	3 W
Experimental	- (N)	17	30	28	29
	(%)	53.1	96.8	96.6	93.5
	± (N)	13	1	1	2
	(%)	40.6	3.2	3.4	6.5
Control	- (N)	20	26	19	26
	(%)	74.1	92.9	67.9	96.3
	± (N)	7	2	9	1
	(%)	25.9	7.1	32.1	3.7
	(N)	0	0	0	0
	(%)	0	0	0	0

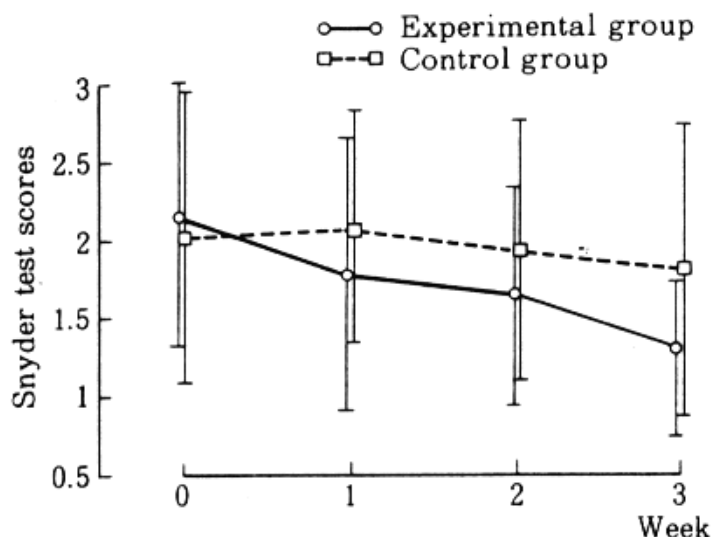


Fig. 2. Changes in Snyder test scores in the experimental and control groups

Snyder test showed a tendency to decrease, however, the degree of decrease was greater in the experimental, ie., semiconductor toothbrush, group than in the control group. However, there was no significant differences between the 2 groups for any week.

**2. Saliva/occult blood test**

The results of bleeding tendency determined using Salivaster-Bld are shown in Table 4. Both groups exhibited a tendency towards a gentle decrease with respect to the mean value, although there was no significant difference between the 2 groups.

**3. PMA-I**

The results of PMA-I with respect to the investigation of the improvement in gingival tissue through the use of the semiconductor toothbrush are presented in Table 5 and Figure 4. Even though the PMA-I mean value of the experimental group prior to the study was higher than that of the control group, the PMA-I value showed a clear tendency to decrease with use of the semiconductor toothbrush. A significant difference compared to the control group was

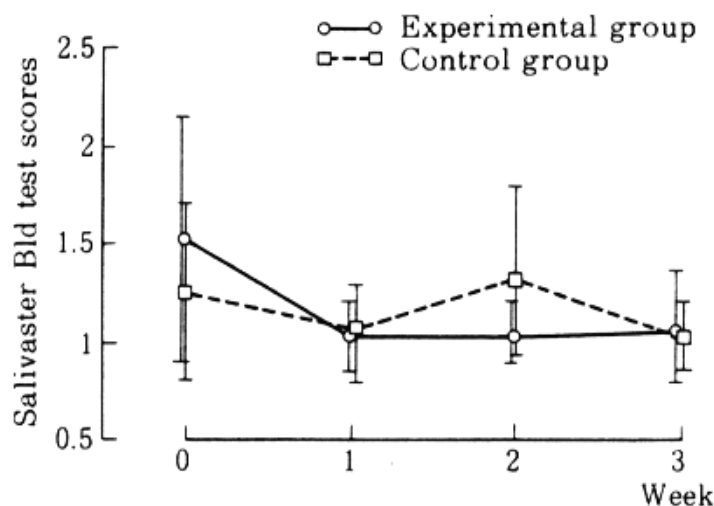


Fig. 3. Changes in Salivaster Bld scores in the experimental and control groups

observed at 3 weeks. In Figures 5 and 6, the PMA-I values for the upper and lower jaws showing P and M separately are presented. It was found that for P (Papilla) the weekly changes in the value for the upper jaw were more of a straight line in nature compared to that for the lower jaw for the experimental group. No effect was observed in the control group with the conventional toothbrush.

On the other hand, there was a slight change

Table 5. PMA-I scores

Group	Week			
	0	1	2	3
Experimental	4.48 ± 2.75	2.93 ± 2.00	2.06 ± 0.75	1.58 ± 1.40
Control	3.39 ± 2.75	2.79 ± 2.14	2.39 ± 1.50	3.44 ± 1.38**

Values are mean ± S. D. \*\* P < 0.01

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