CHAPTER VI

CONCLUSION

This study investigated the longitudinal changes of WF6 epitope levels of C-6-S in human GCF collected from teeth undergoing orthodontic tooth movement. WF6 mAb and the ELISA were used to quantify the C-6-S levels in human GCF. In this study, seven canines were included as experimental teeth, and four incisors were included as control teeth. The results were summarized as follows:

1. The WF6 epitope of C-6-S could be detected in human GCF collected from both canines and incisors during orthodontic tooth movement.
2. The cyclical pattern of C-6-S changes was observed in canines, but not in the incisors. In addition, the C-6-S levels of the incisors remained low throughout the study.
3. During the first four weeks of canine movement phase or M phase, the median of C-6-S levels gradually increased from M0 to M4 in the canines with a significant difference between the C-6-S levels of M0 and those of M4. In addition, there were no significant differences between the C-6-S levels of canines and those of incisors in any periods although the C-6-S levels of the canines were higher than those of the incisors in any period of time from M0 to M4.
4. During the first four weeks of the complete movement phase or S phase, the median of C-6-S levels continually decreased at S1and S2 but increased at S3 and S4 in the canines. In contrast, the median of C-6-S levels continually increased at S1 and S2, and then decreased at S3 and S4 in the incisors. There were no significant differences between each treatment phase in the S phase in both canines and incisors. However, there was only a significant difference in the C-6-S levels between canines and incisors at the S4.