CHAPTER VI

CONCLUSION

This *in vitro* study showed that the corrosion products released from uncoated commercial magnets had the cytotoxic effect on cultured human gingival epithelial cells in a five day period of incubation time. In addition, an apoptosis is a major form of cell death by these magnet corrosion products.

The results could be summarized as follows:

1. The fluorescence appearance of nuclei from cultured human gingival epithelial cells treated with corrosion products has a characteristic of apoptosis. The majority of these treated nuclei were presented with slight reduction in their diameter and an evident condensation of chromatin. However, the characteristic of necrosis had not been observed in all groups.

2. There was no obvious difference in terms of the appearance of PI stained nuclei between cells treated with 50 and 500 µl of the corrosion products.

3. The number of apoptotic cells in the presence of corrosion products was significantly higher than that of the control untreated cells (P=0.009* and 0.027* in group 3 and 4, respectively).

4. There was no significant difference in the number of necrotic cells between control and all experimental groups (P=0.158).

5. There was significant difference in the number of dead cells (apoptotic and necrotic cells) between control and all experimental groups (P=0.0049*).

6. There was no significant difference between the number of apoptosis as well as necrosis of cultured human epithelial cells that were exposed to either 50 or 500 µl of CP solution (P=1.00).