

CHAPTER VI

CONCLUSION

In this investigation, the initial dimensions of the 1, 2, 3-time glutaraldehyde treated and untreated elastomeric ligatures were measured. The initial force and the generated force at the 1st, 2nd, 7th, 14th, 21st and 28th days were also tested. Then the initial force and the generated force at the following time intervals to 28 days were converted to the percentage of the remaining force.

The conclusions were as follows:

1. The one time immersion in a 2% glutaraldehyde solution had no significant effect on the initial dimensions and the initial force of elastomeric ligatures.

2. The 2 and 3-time immersion in a 2% glutaraldehyde solution significantly increased their outer diameter and wall thickness, and significantly decreased their initial force, but did not markedly affect the force degradation pattern and the percentage of remaining force at each time interval of elastomeric ligatures.

3. The force degradation patterns of the 1, 2, 3-time glutaraldehyde treated and untreated elastomeric ligatures were relatively similar. The generated force continuously decreased with time, the greatest force loss occurring on the first day. The percentage of remaining force at the 1st day of all four groups was 27.02% – 28.23%; then they gradually decreased throughout the 28 day-period to 4.25% - 5.03%.