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WOUND HEALING OF TEAT SUTURE IN THE COW

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The aim of the present work was to study the healing process of teat sutures, and for the purpose of improving the suture technique, to observed gross and histological time-course changes of the teat suture site when silk, catgut and polyglycolic acid (PGA) were used for continuous suturing of the mucosal layer in cows.

The following results were obtained :

1) Healing of the skin wound. irrespective of the kinds of inner layer suture material used, occurred after about one week when observed grossly and after about three weeks when observed histologically.

2) Use of silk : Gross observations revealed that silk persisted at the site of mucosa beyond seven weeks and formed granulation. Histologically, marked neutrophil infiltration and histocyte migration were seen after one week. A so-called suture granuloma was seen at three weeks, and after ten weeks, the silk was surrounded mainly by fibrous connective tissue with few cells.

3) Use of catgut : From gross observation, it was found that suppuration and proliferation of connective tissue formed around the catgut. Histologically, neutrophil infiltration and tissue reaction were seen after one week, but samples taken after the fourth week showed that catgut was surrounded by fibrous connective tissue and that tissue reaction decreased.

4) Use of PGA : Gross observation showed that proliferation of the connective tissue did not occur around PGA. Histologically, slight tissue reaction was seen in the early stage. Samples taken after the third week showed that slight histocyte migration occurred and that PGA was surrounded by fibrous connective tissue.

5) The results of the present work suggested that PGA was best suited for mucosal suture of teat.