EXPERIMENTAL STUDIES ON THE HEALING PROCESS IN CANINE CYSTOTOMY

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Cystotomy is one of the most important techniques in small animal practice. The healing process in canine cystotomy was investigated morphologically and biochemically to obtain basic data on cystotomy.

The results were summarized as follows:

1) Hyperemia, hemorrhage and edema disappeared almost completely grossly from the area of incision at the 14th day after cystotomy.

2) The avascural area at the site of incison began to reduce gradually microangiographically from the 2nd to the 5th day after cystotomy, and vascular regeneration was mostly completed by the 14th day.

3) Inflammatory reaction at the site of incision subsided histologically from the 7th day after cystotomy. Granulation tissue was distinguishable from the 5th day and followed by replacement of fibrous connective tissue from the 7th day after cystotomy. Intension at the site of incision then appeared at about the 14th day after cystotomy.

4) Among the biochemical findings, concentration of incision rapidly increased and reached a maximum level at the 7th day, followed by a steady decline, and the hexosamine values remained high until the 5th day, after which they declined after cystotomy. However, hydroxyproline values fell to a minimum level at the 2nd day and recovered to the preoperative level at the 5th to the 7th day, then gradually increased.

From the results mentioned above, it was suggested that the incised wound of the canine urinary bladder was almost completely healed by the 14th day after cystotomy.