**Tunica Vaginalis Autograft for Perineal Hernia Repair in Dogs**

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**Introduction**

Perineal hernia results from failure of pelvic diaphragm muscles to support the rectal wall. Perineal herniorrhaphy by apposing the external anal sphincter to the levator ani, coccygeus, and internal obturator muscles with or without the sacrotuberous ligament is commonly used (1, 2). Recurrence after this technique has been reported (1, 3). Since weakening of the pelvic diaphragm muscles is considered the major cause of the failure of hernia repair, fascia lata autograft (4) and polypropylene mesh (5, 6) have been used for reinforcing the muscles. Our objective was to evaluate the effectiveness of using tunica vaginalis (TV) autograft in perineal hernia repair in dogs.

**Materials and Methods**

Seven male dogs with perineal hernia were castrated right before herniorrhaphy to harvest TV autograft (Fig. 1A). Then, a dorsoventral skin incision was made lateral to the anus extending from the tail base to the ischiatic tuberosity. After returning hernial contents to their original location, a sheet of the autograft was inserted under the coccygeal muscle and secured to the sacrotuberous ligament, external anal sphincter, and internal obturator muscles with simple interrupted 2-0 polypropylene sutures (Fig. 1B). The subcutaneous tissue and skin were closed as routine. All dogs were observed 3 months postoperatively.

**Results and Discussion**

Perineal hernia was successfully repaired with the TV autograft in six dogs. The hernia recurred in a 10 years old Terrier 10 days after surgery and was repaired 2 weeks later. Histological examination of the graft retrieved from the latter dog.

**Figure 1.** A-Tunica vaginalis autograft (g) harvested after castration. B-the autograft secured to the external anal sphincter (e) and coccygeus muscles (c) for perineal hernia repair in a dog found fibroplasia and neovascularization with minimal inflammatory reaction.

TV autograft successfully strengthened the pelvic diaphragm for perineal hernia repair in six dogs. Recurrence of the hernia in one dog resulted from incapacity of thin muscles at the ventral area to hold the graft. Similarly, the recurrence was seen in one of twelve dogs receiving polypropylene mesh (5). The TV autograft possesses advantages over the synthetic material of no graft cost and immunologic rejection. The graft is readily obtained from the castration which is recommended to reduce recurrence and sex hormones involved in the pathogenesis of perineal hernia (1, 2).

**References**