

Clinical Article

Polypropylene Mesh Herniorrhaphy in a Cat

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ABSTRACT

This article pertains to case pertains to Polypropylene Mesh Herniorrhaphy in a Cat. No major complications were noticed even after a period of about five months except that the cat had developed an intermittent mild diarrhea, otherwise it was healthy and calm, passing a normal life with no sings of distress and bulge formation at the site. The diarrhea might be due to the irritation caused to the intestines by rubbing against the synthetic mesh. This may resolve in future when the mesh will be covered by the fibrous tissue.

Key Words: Polypropylene; Herniorrhaphy; Cat

INTRODUCTION

Ventral hernia is the protrusion of viscera through an artificial or abnormal window in the abdominal muscles. It is uncommon in cats and different techniques with different suture materials have been employed with variable success rates (Slatter, 1993). Markham and Salaman, 1989 and Mollay *et al.*, 1991 used marlex (polypropylene) mesh, and in a retrospective study by Shiu *et al.* (1989) large abdominal defects were closed with synthetic sheets of polypropylene or poly-tetra-fluoro-ethylene. The present case is pertaining to seven months old male siamese cat received at the hospital with the complaint of a soft swelling about the size of a lawn tennis ball, on the ventral aspect of abdomen at the median plain. On clinical examination, the cat was found to be having a reducible ventral hernia, with a hernial ring of about 2" X 4" wide in size. According to history the size of bulge had increased a lot during the past few weeks and the cat got lazy with reduced appetite and signs of distress.

MATERIALS AND METHODS

Mesh herniorrhaphy was planned for this case and a polypropylene made synthetic mesh of 6 X 11cm size was used. The animal was anesthetized and prepared for the surgery in dorsal recumbency. A longitudinal incision was given on the skin over the defect in the muscles, slightly longer than the length of defect. The hernial contents were identified, detached and pushed back into their original position. The mesh was placed over the defect on the ventral aspect of the abdominal muscles covering a width of about half an inch of the muscles from the margin of the ring. The size of the mesh was adjusted so by trimming it's sides, which would neither be large enough to allow the hanging of the viscera from the abdomen nor it would be so small to produce tension on the suture line between the muscles and

the mesh. The mesh was adjusted in position by the application of multiple longitudinally directed simple interrupted sutures all around the defect, starting through the mesh, penetrating through all the layers of the abdominal muscles and applying the knots on the ventral aspect of the mesh. Polypropylene suture material of 2/0 size was used for suturing (Slatter, 1993). Thereafter the subcutaneous and the skin incision were also closed with polypropylene material as routine. The movements of the cat were restricted by keeping it caged for most of the time along with regular antibiotics and wound dressings.

RESULTS AND DISCUSSION

The cat started eating properly with routine activities in about three days after the surgery. No major complications were noticed even after a period of about five months except that the cat had developed an intermittent mild diarrhea, otherwise it was healthy and calm, passing a normal life with no sings of distress and bulge formation at the site. The diarrhea might be due to the irritation caused to the intestines by rubbing against the synthetic mesh. This may resolve in future when the mesh will be covered by the fibrous tissue.

In conditions when surgeons are encountered with massive abdominal defects in cats, the hernial ring may be closed by the utilization of synthetic mesh made of polypropylene a non-absorbable suture material with promising success rates and no major complications, provided the mesh is applied properly and its size and tension adjusted accordingly. Though different surgeons have applied mesh on the inner aspect of the abdominal muscles incorporating different layers of the muscles in suturing (Slatter, 1993), in the present case polypropylene made synthetic mesh was employed with success on the outer aspect of the abdominal muscles. This method was easier to fix the mesh due to ease in the application of

sutures. The sutures were applied incorporating all the layers of the abdominal muscles. In this way we can save the pets and help them enjoy the life in comfort.

REFERENCES

Molloy, R.G., K.T. Moron, R.P. Waldron, M.P. Brady and W.O. Kirwan, 1991. Massive incisional hernia, abdominal wall replacement with Marlex meshes. *British J. Surg.*, 78: 242-4.

Markham, N.I and J.R. Salaman, 1989. Use of mersilene mesh and a zip in the management of severe intra-abdominal sepsis. *J. Royal College of Surgery, Edinburgh*, 34: 333-5.

Shiu, M.H., L. Weinstein, S.I. Hajdu and M.F. Brennan, 1989. Malignant soft-tissue tumours of the anterior abdominal wall. *American J. Surg.*, 158: 446-51.

Slatter, D., 1993. *Textbook of Small Animal Surgery*, Vol. I, 2nd Ed., pp. 435, 447. W. B. Saunders Company, Philadelphia

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