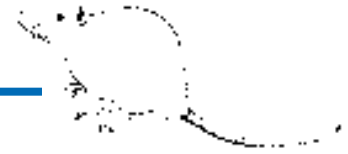




Aortic Coarctation



Introduction:

This is an interesting model because it causes hypertension proximal to coarctation but normotension below coarctation in two days.

Animal Preparation:

Fast animal the night before surgery.
Prepare animal for aseptic surgery using sterile instruments

Surgical Protocol:

Abdominal aorta is exposed through a laparotomy and is then dissected free of the vena cava.

A 10 x 8 mm piece of sterile Handi-Wrap or Saran Wrap is placed around the aorta at the site of the coarct. This prevents the aorta from growing around the ligature and effectively bypassing the coarctation.

A blunt hypodermic needle (20 gauge needle for 200 gram rat) is placed along the axis of the aorta over the Handi-Wrap and a length of 3-0 suture is tied around the aorta, the Handi-Wrap and the hypodermic needle (Fig. 1).

The suture (3-0 or 3-0 silk) is then tied snugly but not so tight as to crush the aorta (Fig. 2). The hypodermic needle is then removed, leaving a stenosis in the aorta which is the same size as the hypodermic needle. (Fig. 3).

Results:

Hypertension developed in 2 days

Suprarenal - normal renin

MAP	150(mmHg)	in a few days
	160(mmHg)	in 1 month
	170(mmHg)	in 2 months

Between kidneys - high renin

