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Effects of Anabolic Steroids: Morris Foundation Study

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Diagnosis: bone foreign body in the esophagus.

The foreign object is causing a marked ventral depression of the trachea and heart. The cloudiness and density of the cranial mediastinum is due to the accumulation of ingesta cranial to the obstruction. Note the accumulation of gas in the stomach and intestine. This is a common finding in animals with swallowing or esophageal problems.

The shape of the bone (part of the clavicle of a turkey) caused it to become stuck at the level of the base of the heart. It was removed via a transthoracic esophagotomy. The follow-up radiograph (Fig. 3) shows that the esophagus has returned to its normal size and position.

Lateral thoracic radiograph, post-operatively

Effects of Anabolic Steroids
Morris Foundation Study

Anabolic steroids, a drug commonly given to promote growth, especially in race or show horses, may be harmful to a mare's reproductive performance, a veterinary scientist says.

Steroids are also believed to improve physical development, muscle tone, weight gain, and speed-up recovery after surgery.

Edward L. Squires, Ph.D., of Colorado State University, believes steroids may be harmful since other female animals and stallions develop reproductive disorders when given the drug. Steroids are man-made hormones similar to male sex hormones. Anabolic steroids are a variation of testosterone, the male sex hormone.

Unborn animals become more male-like when the drug is given during pregnancy, and heat is prevented in the dog and cat.

Two preliminary studies indicate the drug is detrimental to reproduction in horses. The first study, done with stallions given testosterone, concluded that sperm concentration, motility and total sperm per ejaculate were decreased. Testicular size was approximately 50 to 85 percent lower in stallions given steroids.

The second study found that high doses of anabolic steroids decreased sperm concentration, total scrotal width and concentrations of LH, a hormone that plays a major role in reproduction.

Steroids did not alter sexual behavior in stallions, but did have adverse affects on the formation and development of sperm and seminal quality.

Dr. Squires, under sponsorship of Morris Animal Foundation, of Englewood, Colorado, believes the drug upsets the hormonal balance of animals, and is investigating the drug's long-term effect on mares.

The study will evaluate the effects of steroids while they are being given, and the effects after the mare is taken off the drug. Dr. Squires speculates that mares will probably recover and be able to reproduce normally within 60 to 90 days, once taken off the drug.

Steroids may cause mares not to come into heat at all, or to come into heat on an irregular basis, Dr. Squires says. Sexual behavior may also be affected, as male-like behavior has been reported in some cases. Other possible effects are that reproductive organs develop slowly or improperly, or the mare is ready for reproduction at a later age than normal due to hormonal upset.

Morris Animal Foundation is a nonprofit organization which funds research in veterinary schools into the health problems of dogs, cats, horses and zoo animals.