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A Report of Pseudohermaphroditism in a Goat

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According to Phillips, Brief, Sutton and Mills¹ animals having gonads of one sex and the remaining genitalia resembling the other sex are called pseudohermaphrodites. If the gonads are testes, Young² classifies the animal as a male pseudohermaphrodite. Crew³ reported hermaphroditism in a number of Toggenberg goats.

The condition we are about to describe was first brought to the owner's attention when the clitoris of this young Toggenberg goat became very enlarged and protruded from the fossa clitoridis into and through the external opening of the vulva. Instead of protruding from the fossa entirely, the clitoris was kinked and folded like an accordian and thus occupied a minimum of space. If it had been straightened out it perhaps would have been several inches long.

Along the median line deeply to the skin, a slender muscle ran from the sternal area to the ventral part of the vulva. The urethra opened into the vulva at the usual place, but so did the uterus. In other words no vagina or cervix was present as such. Probably this should be called a urogenital sinus. The passageway continued forward to one inch behind the anterior border of the pubis, where it was joined by both the uterus and the urethra.

The body of the uterus was large and

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Internal Appearance

was joined anteriorly by two large horns. The opening of each into the body was only about the size of a dime. The horns were curved normally and extended well into the abdominal cavity. Most of the way they were fused to each other externally.

No fallopian tubes were present. Located at the tips of the horns behind the kidneys were testicles instead of ovaries, the identity of which was proved by histological sections. The testicles contained an epididymis and a ductus deferens which faded into the peritoneum anteriorly. A slender strand of muscle arose from the internal oblique muscle to insert just anterior to the testicle. A venous plexus ran from the more anterior part of the testicle to the posterior vena cava, and an artery from the posterior part of the aorta also joined the testicle at the same place. No ovarian tissue could be found.

A small artery arose from the umbilical artery at its origin to join the ovarian artery and to supply the uterus; an artery from the internal iliac supplied the uterus farther back. A small ligament came from the junction of the two horns ventrally to join the upper surface of the bladder. A small glandular mass, which resembled seminal vesicle histologically, was found on the uterus just anterior to its posterior termination. The whole apparatus was suspended by the broad ligament.

References

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A Vitamin Deficiency

It was formerly thought that traces of gossypol, a poison found in cotton seed, was responsible for the animal refusing to eat all of their feed, bloating, swelling of the joints, and staggers.

In Oklahoma tests were run on dairy calves, heifers, and milk cows. It was found that when cotton seed was fed along with beet pulp the "poisoning" symptoms appeared. But no harm resulted when the ration was made up of good prairie hay balanced with cotton seed meal. Danger of sickness was eliminated even when large quantities of meal were fed—along with cod liver oil, tomatoes, carotene, or alfalfa hay—all rich in vitamin A.

However, the tests showed a correlation between butter quality and the feeding of too large quantities of cotton seed meal even with the addition of vitamin A. Cream from the cows getting the heavy cotton seed feeding took longer to churn if it had been pasteurized, cooled and held for several hours. The churning period could be shortened by raising the cream temperature 5 or 6 degrees, it was found, or when churned immediately after cooling. In addition the butter from this cream also showed a tendency toward gumminess.

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