

and epididymis were identified. The testicular tissue was attached to the broad ligament as the uterus and ovaries would be. Both testes were ligated and removed, the uterus was removed via a routine hysterectomy. Incision was closed in a routine fashion, the lamb recovered from anesthesia with no complications. Lamb was euthanized at a later time. Uterus and gonads were submitted for histopathology. Histopathology revealed that gonads contained hypoplastic testicular tissue. Seminiferous tubules were diffusely hypoplastic with a complete lack of spermatogenesis. Epididymis was hypoplastic with compressed ducts. There was marked congestion in the uterus with the lumen diffusely filled with erythrocytes consistent with intraluminal hemorrhage and the endometrial lamina propria was expanded by edema. No ovarian tissue was identified in the sections of the testis that were evaluated. However, due to the difficulty associated with identifying ovarian tissue, the presence of ovotesticular tissue could not be ruled out. Blood was submitted to the Texas A&M College of Veterinary Medicine, Molecular Cytogenetics Laboratory for karyotyping. The results revealed a genetically female sheep with a normal sheep karyotype (54 XX). On polymerase chain reaction, the lamb was negative for the presence of the Y-linked SRY gene and positive for the X-linked androgen receptor gene. No chromosomal abnormalities were observed. Intersex conditions in goats and in sheep are believed to be linked with the polled gene. Affected animals are genetically female (XX), SRY negative and believed to be homozygous for the polled gene. In this case the lamb is an intersex, consistent with polled intersex syndrome sex reversal but, may be a true hermaphrodite.

Keywords: Sheep, polled, intersex, sex reversal, chromosome, hermaphrodite

Reduction of equine monozygotic twins using craniocervical dislocation via colpotomy

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Twin management is a very important facet of equine reproduction management. Compared to dizygotic twins, monozygotic twins are a relatively rare occurrence in mares. Management of monozygotic twins is considerably more complex when it comes to preserving the safety and welfare of the mare and developing pregnancy. Of the options of twin reduction after day 50 of pregnancy, craniocervical dislocation (CCD) has been reported to be a superior choice.¹ We have modified the surgical approach for a CCD from the reported flank laparotomy to colpotomy. In our hands, successful reduction of dizygotic twins by CCD via a colpotomy approach has been 71% (n = 29). To-date we have managed 2 cases of monozygotic derived twins with a 50% success rate. Our hypothesis for the current case was that

CCD via colpotomy is a successful technique for monozygotic twin management given its successful application on our first case of monozygotic twin reduction. An embryo recipient mare that received 1 embryo was presented at 65 days of pregnancy for the reduction of 1 fetus after diagnosed to have monozygotic twins via ultrasonography by the referring veterinarian. The referring veterinarian was actively monitoring the unilateral twin pregnancy for natural reduction. Once the pregnancy reached 60 days with no reduction, the case was referred to us for CCD. After confirmation of monozygotic twins (i.e. 2 separate amnions were observed within 1 allantoic sac), a CCD was performed on 1 fetus via a colpotomy approach. Unfortunately, both fetal heartbeats were lost on detection by the referring veterinarian and presumably aborted between 4 and 6 weeks after CCD procedure. Other cases of monozygotic twins have been reported in recipient mares that received a single embryo.²⁻⁴ Several management techniques were employed in each of these cases with varying outcomes. CCD via colpotomy is a novel approach and was chosen in this case due to the age of the fetuses and a desire to reduce the most cranial that we presumed would have less chorionic attachment and lower development capacity as the pregnancy progressed.¹ The importance of this case is in demonstrating that CCD via colpotomy can be a useful method for management of monozygotic twins; however, prognosis for successful development of the remaining fetus is guarded due to the orientation of the twin fetuses enclosed within a single allantochorion.

Keywords: Twins, monozygotic twins, twin management, embryo recipient, embryo transfer

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Chronic seminal vesiculitis and blocked ampullae in a stallion

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Seminal vesiculitis is a rare condition in the stallion; however, it can result in blocked ampullae. A 12-year-old Gypsy Vanner stallion with a previous successful breeding history was presented for persistent polyspermia, manifesting as an abnormal grey

ejaculate. Semen collected at presentation had pus with no sperm. Testes felt normal but were mildly enlarged with firm epididymides. Ultrasonography findings were normal. Transrectal palpation of the ampullae and seminal vesicles (SV) elicited a painful response. Transrectal ultrasonography revealed fluid-filled ampullae and SV with thickened walls (1.5 cm). Stallion demonstrated normal libido during 3 collections and did not exhibit pain. Cultures were obtained from the unwashed urethral fossa, the distal urethra before and after ejaculation, and from the gel fraction. *Streptococcus equi* subspecies *zooeconomicus* was isolated, confirming the presumptive diagnosis of seminal vesiculitis. Microscopic examination of fresh ejaculate and Diff-Quik stained smears revealed azoospermia, high number of neutrophils, and bacteria in both fractions of the ejaculate in all 3 collections. Transrectal massage of the ampullae and oxytocin treatment immediately prior to the third collection did not alter the ejaculate. The diagnosis of blocked ampullae was confirmed by azoospermia and low concentration of alkaline phosphatase (30 IU/L) in the filtered fraction. Semen was collected 3 times a day and the stallion was treated orally twice a day with trimethoprim/sulfamethoxazole (TMS; 30 mg/kg) for 3 weeks at the owner's facility. Stallion was reexamined at the hospital. There were no changes to ampulla and SV. The

first collection had > 70 ml heterogenous gel fraction and concentrated sperm-rich fraction (917×10^6 sperm/ml, 14.5×10^9 total) with marked number of detached heads and dead sperm (< 1% motility). Sequential collections had decreasing volume of gel, increasing number of sperm (up to 83.2×10^9), and an increasing trend in the motility rate in the ejaculate. Due to lack of complete response to TMS, local treatment of the SV was initiated using video endoscopy (5.9 mm x 110 cm). The local treatment consisted of vigorous lavage (500 ml lactate Ringer's saline per gland) followed by local infusion of ampicillin (2 gram in 18 ml) initially for 2 days followed by a compounded penicillin gel (5 MIU in 20 ml) every other day for a total of 3 treatments. Purulent material within the seminal vesicles markedly decreased throughout treatment. Stallion was discharged with instructions to have twice daily collections and continued TMS treatment at the owner's facility before readmission for follow-up. This case highlighted the importance of managing seminal vesiculitis aggressively, and the possible sequela of blocked ampullae due to local inflammation and accumulation of pus and sperm.

Keywords: Stallion, seminal vesiculitis, blocked ampullae