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Viable offspring after successful non-surgical embryo transfer in goats

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The objective of this study was to investigate the feasibility of non-surgical embryo transfer in goats. Toggenburg donor goats (n = 2) were superovulated following standard procedures and the uterus was flushed for embryo collection, nonsurgically via transcervical, seven days after estrus/mating. Viable embryos were aspirated to a central of three columns of holding medium in a tomcat catheter, by using a 5 mL syringe with 2 mL of medium. Non–lactating, pluriparous Toggenburg does (n = 10) were synchronized for ET; suitable recipients received either a pair of embryos (n = 2) or one embryo each (n = 2), in a total of six embryos transferred. Corpora lutea were detected one day before embryo transfer (D6) by transrectal ultrasonography to select suitable recipients. Embryo transfer (ET) was performed using a novel procedure, which consisted of: insertion of a number 2 Collin speculum into the vulva and vagina, cervix localization using a light source, and immobilization by an Allis forceps. A number six urethral catheter, humidified with holding medium, was inserted into the cervix using a mandrel and the cervical rings were gently transposed. After loss of resistance, the urethral catheter was moved laterally to reach the uterine horn ipsilateral to the ovary bearing the CL. Then, the mandrel and Allis forceps were removed, a syringe/tomcat was attached to the urethral catheter, embryos were transferred into cranial uetrine third, and the urethral catheter was finally removed. Recipients that had ovulation in only one ovary were used to test the efficiency of embryo deposition. The time spent from speculum insertion until its removal was less than three minutes, whereas the time to transpose the cervix was inferior to one minute. Pregnancy diagnosis by ultrasonography 23 day later revealed that all ET were successful in reaching the desired uterine horn. The two recipients that received two embryos became pregnant and gave birth to three kids. These first results may encourage the use of this technique, since it was observed that embryo transfer can be successfully performed using non-surgical procedures in goats.