Artificial vagina-induced circumferential preputial avulsion in the bovine

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Avulsion of the penis and prepuce of bulls following semen collection with an artificial vagina has negative economic ramifications because of lost semen collections and the potential to induce impotency. Anecdotally, this condition is relatively common, but is likely underreported because the causative trauma is due to poorly trained staff and improper preparation of the artificial vagina. A 3-year old Gelbvieh bull presented following the observation of blood around the sheath after semen collection the week prior to, and also on the day of, presentation. Penile hematomas, penile or preputial lacerations, and preputial avulsions are common reproductive tract injuries in bulls. These conditions can result in preputial bleeding and are diagnosed through physical examination. Examination of the penis and prepuce revealed a circumferential preputial avulsion. The penis was exteriorized and mepivacaine (Carbocaine®, 240 mg sc, Hospira, Inc., Lake Forest, IL, USA) was administered proximal, and distal, to the lesion. The injured area was rinsed with sterile saline. Poliglecaprone (Monocryl®, Ethicon, Somerville, NJ, USA) suture (2-0) was utilized to appose the edge of prepenile preputial tissue with that of the glans penis integument. Four cruciate sutures were placed equidistant around the circumference of the penis and simple interrupted sutures were placed between each cruciate. Cefapirin benzathene (Cefa-dri®, 180 mg, Fort Dodge Animal Health, Ft. Dodge, IA, USA) was administered over and under the suture line with a teat cannula, the penis was placed back into the preputial cavity, and an elastic bandage (Elastikon®, Johnson and Johnson, New Brunswick, NJ, USA) was placed on the external prepuce for 5 d to maintain penile retraction. The owner was advised to provide the bull 60 d of sexual rest. Semen collection with an artificial vagina 80 d post-surgery yielded two ejaculates of 7 mL each. The ejaculates possessed 70% and 84% total motility, and 79% and 90% normal morphology. Bulls sustaining a circumferential avulsion of the prepuce and penis can be repaired utilizing the described surgical technique.

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References