A urethral diverticulum is a localized saccular dilation of the urethra that communicates to the urethral lumen, and it can be classified as either congenital or acquired. In male horses, urethral defects, such as urethral rents, are common and occur most often on the caudodorsal convex surface of the urethra at the level of the ischial arch. However, an acquired urethral diverticulum due to a breeding injury has not been previously described. A six year-old AQHA stallion was presented in December of 2010 with a prior history of a breeding injury involving the penis and a surgical intervention to repair his injured urethra 1.5 years previously. The stallion had a successful breeding a year after surgery. The stallion was referred due to blood dripping from the penis after a breeding attempt. The stallion had normal physiological parameters, the left testis was 9.0 x 5.5 x 7.5 cm (L x W x H) with an echo dense region (0.6. x 0.6 cm) on the caudoventral aspect of the testis, lacking blood flow (color Doppler), and was interpreted as a calcification. The right testis was located in the inguinal area and measured 6.4 x 3.0 x 3.0 cm (L x W x H). The gross external examination of the penis and ultrasound examination of the accessory sex glands revealed no abnormalities. Semen collection was attempted. The stallion showed good libido, but stopped thrusting prior to ejaculation, and blood was noted coming from the urethra. A urethroscopy was performed and revealed urethritis, small ulcers, mucus material in the urethra and bladder. In addition, a dorsal urethral diverticulum, 50 cm from the urethral opening, which communicated with the corpus spongiosum was noted. The tissue of the diverticulum was severely inflamed, and coated with mucoid material and urine crystals. Culture and sensitivity of the different urethral lesions and bladder yielded >2+ Streptococcus zooepidemicus. Antibiotic therapy with trimethoprim sulphonamide (TMS; 30mg/kg) SID for three weeks, sexual rest, followed by reassessment for surgery was recommended. At the subsequent examination, the effected urethral tissues appeared less inflamed and culture revealed no growth. Penile ultrasound then showed a 2 x 3 cm linear diverticulum that communicated with a larger fistulous diverticulum. An ejaculate was obtained and semen analysis showed 43% morphologically normal sperm, with low motility. Antimicrobial therapy was discontinued for three days and a urine sample and cytobrush swab from the urethral diverticulum yielded Streptococcus equi zooepidemicus only from the urethral diverticulum. A perineal urethrostomy and distal urethrostomy over the diverticulum was performed with placement of a Penrose drain which was left in place for 12 days. Treatment included phenylbutazone, TMS BID for 16 days, with daily lavage using lactated Ringer’s solution followed by 8 mM TRIS-EDTA for 10 days. The incisions were left to heal by second intention. The TRIS-EDTA was used to treat the urethra and diverticulum as a pathologic biofilm was suspected. The surgical lesions healed and the stallion was retired from breeding. A buccal mucosal urethroplasty has been successfully used as a treatment for a urethral rent and was considered in this case.

Keywords: Urethral diverticulum, urethritis, urethroscopy