Hyperestrogenism is a condition generally associated with an increase in endogenous estrogen caused by dysfunction in the hypophyseal-pituitary-gonadal axis, frequently the result of a granulosa or sertoli cell tumor. However, it is important to consider exposure to exogenous estrogen when examining patients with symptoms resembling an estrogen-secreting gonadal tumor.

Pandora, a 2.5-month-old intact female Pit Bull, was presented with significant perineal enlargement and a history of urine dribbling and straining to defecate. A digital examination revealed no perineal hernia; normal urethral and vestibular anatomy was visualized on vaginoscopy. A vaginal cytology revealed cornification of the epithelial mucosa. Differential diagnoses at that time included an estrogen-secreting gonadal tumor, a disorder of sexual development (suspected from the distorted appearance of the external genitalia), or exposure to exogenous estrogen. Diagnostic options included abdominal ultrasonography to identify the gonadal architecture or presence of a tumor, karyotyping, or a baseline hormone panel. Initial treatment options included tramadol to reduce discomfort associated with the vulvar swelling and surgical removal of the gonads.

Taking into account the identified cornification of vaginal epithelium in a pediatric patient, a more comprehensive discussion with Pandora’s owner was pursued and revealed that the client was being treated under the guidance of her doctor with Evamist®, an estradiol transdermal spray used to treat vasomotor symptoms consequent to menopause. The owner was applying the product to her arms for a duration of two weeks before the onset of Pandora’s clinical signs.

Pandora’s case illustrates the importance of obtaining a comprehensive history from clients in order to prevent unnecessary diagnostic tests and procedures. Pandora’s owner went on to change the Evamist® application site from her arms to her abdomen. Roughly a month and a half later, Pandora’s swelling decreased and Pandora continues to do well today with no recurrence of her clinical signs.

**Keywords:** Hyperestrogenism, canine, exogenous estrogen