**Pyocolpos in a spayed queen with imperforate hymen: a case report.**

S. Egyptien, N. Shimizu, N. Anne-Archard, F. Billen, S. Noël, S. Deleuze

Clinical department of veterinary sciences, University of Liège, Liège, Belgium

segyptien@uliege.be

A 1-year-old queen was presented for dysuria, strangurya and abdominal discomfort. She had been ovariectomized or potentially ovariohysterectomized at 6 months of age. Abdominal palpation elicited pain and revealed a firm, well-circumscribed mass dorsal to the bladder. No vulvar discharge was observed and the rest of the clinical examination was unremarkable. Ultrasonography confirmed a caudal fluid filled abdominal structure (5cm X 2.5cm) extending into the pelvic cavity, displacing the colon dorsally and the urethra ventrally. No ovarian remnant could be found. Vaginoscopy was not performed due to unavailable small diameter size endoscope. Retrograde vagino-urethrography showed contrast in the vestibule, urethra and urinary bladder, while no contrast could be observed in the vagina. At that stage, an imperforate membrane at the vestibulo-vaginal junction with secondary vaginal distension was highly suspected. During surgery, complete ovariohysterectomy, including removal of the uterine body, was confirmed and a distended, but otherwise normal looking, vagina was observed. Total vaginectomy was performed and the purulent content was swabbed for bacteriology. Post-operative treatment included amoxicillin-clavulanic acid (20mg/kg PO BID), meloxicam for a week (0,1mg/kg PO SID). *Enterobacter cloacae* was isolated and antibiotherapy was changed into a marbofloxacin administration for 2 weeks (5mg/kg PO SID), according to culture sensitivity. The queen recovered without any major complication. Definitive diagnosis of imperforate hymen is usually achieved by vaginoscopy, which is the most common complementary exam that can be performed either with an endoscope or a speculum. Due to technical limitation such as scope size, retrograde vagino-urethrography can be used to confirm a suspected blind vestibule. To the authors’ knowledge, this is the first report of an imperforate hymen in the queen and the first case of pyocolpos in that species. Cases of imperforate hymen have been described in young girls, cows, buffaloes and bitches. A complete persistent hymen is one of the many congenital abnormalities of the vestibulo-vaginal junction or the vestibular area. The hymen is formed by the fusion of the Müllerian ducts with the urogenital sinus during embryo development and usually disappears before birth. In our case, the origin of the bacterial infection remains unclear. Contamination during neutering may be suspected. However, the 6-month delay before clinical onset makes it rather unlikely. Alternatively, an ascending contamination via partial perforation of the hymen, that somehow re-sealed afterwards, seems more likely as it has already been speculated in the bitch. *Enterobacter cloacae,* a Gram-negative commensal flora of the digestive system of humans and animals was identified. It is an opportunistic pathogen of the urogenital tract and has been involved in multidrug-resistance spreading. It over-expresses chromosomic cephalosporinases leading to resistance to third generation cephalosporins. It may also carry genes for extended-spectrum -lactamase or even carbapenemase. They are naturally resistant to aminopenicillins, amoxicillin-clavulanic acid, first and second generation cephalosporins. They are naturally sensitive to aminosids, quinolones, tetracyclins and trimethoprime-sulfonamides. In the present case, it was resistant to cefovecin, amoxicillin-clavulanic acid, trimethoprim/sulfonamide, sensitive to gentamicin and marbofloxacin but intermediate to enrofloxacin. *Enterobacter cloacae* has been isolated from intra-venous catheters in human hospitals and reported as responsible for nosocomial epidemics. As far as we know, a similar role in veterinary medicine has not yet been reported. Actually, little is known about *Enterobacter cloacae’*s prevalence and clinical impact in veterinary medicine compared to human medicine. Epidemiological surveys should be conducted to answer these interrogations. In conclusion, this first report of a persistent hymen in the queen highlights vagino-urethrography usefulness for diagnosing imperforate hymen in small patients, as well as the inclusion of congenital abnormality in the differential diagnosis of dysuria. Finally, it raises the question of *Enterobacter cloacae*’s implication in nosocomial infection in veterinary medicine.