

My *pro bono* tenure at the various animal shelters in my career life has introduced me to many new medical conditions, ways to manage chronic variations on typical conditions, and a profound appreciation for what the animal body can do without our help. As our veterinary world becomes more and more involved in the care of pets who spent at least a part of their early lives in shelter/rescue settings, we will do well to pay attention to the unique conditions resulting from their tenure there. I'm a surgeon, so you can bet the following notes will not involve a kennel cough discussion! But I will (on a soapbox) say that when the for-profit veterinary world encounters a (now) pet animal with a shelter/rescue life-stop, we need to try really hard to diagnose and treat the pet without a blame-game (like we see in Washington D.C right now) or an overly and unwarranted pessimistic prognosis. These pets need their new homes, and we in the veterinary world can be encouraging partners in making their new lives successful.

I am on the docket this Monday to fix just such one of these odd, shelter/rescue-"induced" problems in a little kitten. Ironically, I was attending a soft tissue surgery conference a few years back, and one of the speakers presented an abstract case series on this little diddy. Half-way thru, as he described the findings and scratched his head outloud about pathogenesis, I raised my hand and asked, "Were they all orphaned, bottle-fed kittens from a shelter/rescue setting?" He paused, and then slowly said with a question in his tone that they were. Ha! I sorta stole his thunder a little bit. (Shame on me...)

Here is how the story goes...

A litter of kittens is orphaned young and needs bottle feeding. A foster provider is identified and takes over the little kitten team. They are housed together in a little carrier with towels, etc, kept warm, fed via plastic bottle cat milk replacer every few hours, stimulated to urinate/defecate and cleaned after eating. Hour after hour, day after day. Then they get to be 6-8wks of age, are returned for adoption. Out to new homes they go. Then, a male kitten (or two or three) in his new home is seen to be in the litterbox a lot, and not very productive. Off to the veterinarian he goes; (insert positive or negative experience here); if a negative experience, back to the shelter/rescue he goes. There, he may or may not be diagnosed correctly; if not, he is likely euthanized. ***Nota bene:* 8wk male kittens do not get stones, do not get urinary tract infections, do not get FLUTD. These are not realistic ruleouts for posturing in the litterbox at this age.

If he is diagnosed correctly, he comes to someone like me. Good magnification, tiny instruments and suture, steady hands and an awareness of anatomy. Insto-presto! He's a happy, normal kitten again. What a rewarding experience, when he gets correctly diagnosed.

Ok, enough suspense. Or have you guessed the problem and the pathogenesis?

When kittens are young, they suckle almost all day on their momma's teats. I'm no neuroscientist, but I'd say normal kitten brain development requires many hours of suckling. So, when there ain't no momma's teats around in the orphaned setting, they turned to the next best thing...their brother's prepuce. Small, soft, warm and, hey!, liquid comes out when suckling. So their brother gets suckled in this way for hour after hour, day after day. Ouch! Stealing a fancy \$100 word from human medicine, balanoposthitis sets in. If severe enough, fibrosis develops and finally phimosis. If the fibrosis is severe enough, the orifice of the prepuce is minute, pin-point, tiny! (Aren't all of these technical words fun!) So, when the kitten urinates, a normal stream of urine exits the penis and hits a major bottleneck at the preputial orifice. The prepuce balloons up, urine drips out like from an emitter on a drip irrigation line!

He can only pee so much until pressure stops the urine stream, so he waits and tries again after the balloon deflates a bit. Lather, rinse, repeat.

The beauty of this condition is that the penis, urethra, bladder are all ok. We just need to change the diameter of the little emitter. That's where magnification, tiny suture and steady hands come in.

The prepuce is skin on the outside and mucosa on the inside. The junction between these two tissues happens at the orifice. Preventing the redevelopment of the offending fibrosis/stricture requires careful apposition of skin to mucosa and no undo inflammation from crushed tissue or huge/inflammatory sutures. The tenets of cosmetic/reconstructive surgery hold for fixing this condition, but it really is just a nip and a tuck.

Tenotomy scissors (sharp ones) can usually make the full-thickness cut from orifice caudally 4-5mm (sometimes requires #11 BP blade). Mucosa is then apposed to skin along that incision—3-5 simple interrupted 5-0 or 6-0 monofilament suture. Do NOT pick up and crush all of these tissue with huge thumb forceps. Delicate! Magnification is very helpful to achieve accurate identification and apposition of tissues, as well as appropriate suture spacing and bites.

Backing up a bit, if you do have the luxury of attending to orphaned kittens in the foster setting, client education about this behavior and resultant pathology can be very helpful. Environmental enrichment with alternative suckling options (good luck) or really strict supervision and active plucking of one kitten from another is necessary.

There ya go. If you diagnose this correctly, you probably saved another one! Good on ya. Send him on over for me to play with, if you'd like (I love these cases!)

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