### 30. Vaginal Epithelial Disruption with Bleomycin Instillation: A New Murine Model for Vaginal Fibrosis

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**Background:** Adolescents who undergo vaginal reconstruction are often left with debilitating vaginal fibrosis. There are limited prevention methods (poorly fitting stents, estrogen therapy) and treatment options (vaginal dilators, estrogen or hyaluronan (HA) treatment), both of which have poor patient compliance. Our goal is to create a model for vaginal fibrosis, to aid in the development of new prevention and treatment options. We have previously shown a surgical murine model that heals regeneratively, and we hypothesize that by combining epithelial disruption and bleomycin instillation, similar to models of laryngotracheal stenosis, we can establish vaginal fibrosis.
**Methods:** Six to seven week old C57BL/6J mice underwent general anesthesia, and control mice had normal saline instilled intravaginally (NS). For experimental animals, a wire brush was rotated 6 times intravaginally followed by 2.5U/kg bleomycin instillation (ED/B). This was repeated 5 times over ten days. Vaginal tissue was harvested 1 day, 3 weeks, or 6 weeks after the last instillation. Tissue was analyzed using trichrome staining, immunohistochemistry (IHC), gene array, qPCR, and a hydroxyproline assay. Average size of HA and size distribution was also determined. Statistical significance was determined by t-test between NS and ED/B at each time point.
**Results:** We found increased pro-fibrotic markers and decreased anti-fibrotic markers 3 weeks after the last ED/B exposure compared to NS controls. This was confirmed by qPCR, which showed increased expression of Acta2, Col1a1, and Col3 3 weeks after ED/B exposure compared to NS, with no differences observed at 1 day or 6 weeks. Trichrome staining also showed no difference in total collagen between NS and ED/B at 1 day or 6 weeks, however at 3 weeks, there was increased collagen in ED/B compared to NS. Hydroxyproline showed similar trends. Using IHC, we found a decrease in total number of fibroblasts and macrophages 3 weeks after ED/B compared to NS, with no differences found at 1 day or 6 weeks between groups. Lastly, we found an increase in average size of HA and the size distribution of HA 3 weeks after ED/B compared to NS, again with no differences found at 1 day and 6 weeks after exposure.
**Conclusions:** Using epithelial disruption combined with bleomycin instillation, we established vaginal fibrosis, shown by increased collagen content, 3 weeks after the last exposure. However, at 1 day post exposure, fibrosis was not yet established; and by 6 weeks, the vaginal tissue had returned to baseline. We can utilize this model and these time points to not only study the mechanisms of fibrosis but also prevention and treatment options.

### 31. A Case for Interdisciplinary Gender Affirming Care

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**Background:** An adolescent with protracted trauma history and gender dysphoria in the setting of reported intersex diagnosis at birth (assigned female) and two-spirit gender identity presented to the pediatric gender clinic for initial consult. Familial goal was immediate gender affirming hormonal therapy with testosterone. Review of literature done in caring for this patient presented multiple holes in the in current pediatric gender affirming literature.
**Case:** Social work (SW) through a local community partner was involved prior to initial visit and identified complex psychosocial issues: suicidal ideation, potential mental health needs of mother, reported historical abuse by father, gender-identity related violence by peers, and medical distrust. Medical history, per patient and mother, was notable for ambiguous genitalia at birth with mother's decision to assign infant as female. History during adolescence was notable for reported clitoromegaly, hirsutism, deepening of voice, and secondary amenorrhea of 5 years. Per family, no workup had been done to date and no previous medical records were available. The patient did not assent to genital exam, however, the patient self-identified a Ferriman-Gallwey score of 21, chest SMR V, and genitalia matching a clitorophallus via images. Subsequent medical work-up included pelvic ultrasound with normal uterus, ovaries. No hormonal etiology for changes were found, including normal DHEA-S, Prolactin, Testosterone (free + total), estrogen, 17-hydroxypregnenolone, and androstenedione. Given normal medical workup and psychosocial support with SW, testosterone was initiated in accordance with patient and family wishes
**Comments:** There is a dearth of literature for patients who are intersex and identify as two-spirit. Collaborative SW support and medical care was key. SW was able to identify complex concerns and facilitate ongoing care: in particular, SW provided support surrounding the need for further medical workup prior to initiation of HRT, which was instrumental in familial engagement. Continued conversation identified cultural support needs related to Asian American and Tsalagi ancestry and two-spirit identity. SW was able to contextualize school advocacy support in the context of gender identity and historical persecution of Native American Students. Family was connected to a two-spirit society for additional support. This case highlights the need for more robust pediatric gender affirming literature and widespread use of multidisciplinary teams, particularly in providing culturally sensitive care to gender diverse youth.

### 32. The XY Female Siblings: A Case Report On Breaking Bad News

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**Background:** A crucial part of patient management is effective delivery of unfavorable information, in a manner that will not affect future engagement with them, their coping strategies and their compliance to treatment. We present a case report detailing how to communicate a life-changing diagnosis to patients.
**Case:** Two siblings, aged 20 and 18, presented with primary amenorrhea to our Pediatric and Adolescent Gynecology Unit. They were female phenotype with 46XY karyotype. The elder sister had bilateral herniorrhaphy at 14 years with Breast Tanner 4, Pubic Hair Tanner 2, and normal female external genitalia. The younger one had left herniorrhaphy at 12 years, with Breast Tanner 3, Pubic Hair Tanner 1 and normal female external genitalia. They were accompanied by their mother unaware of their diagnosis. Our senior most clinician reviewed their laboratory and imaging results and led the diagnosis disclosure of Complete Androgen Insensitivity Syndrome to the siblings and their mother. Her opening statement was, "We are all different." She then explained the five factors that contribute to gender and then described their diagnosis, what it meant and how it came about. Further, she discussed the cultural and religious implication and informed them of support groups available. Despite the comprehensive discussion and the opportunity to ask questions at any point, the patients seemed perturbed by the news and remained silent. The clinic visit was finalized by answering the concerns raised by their mother and scheduling a follow-up appointment to allow for further conversation and debriefing.
**Comments:** Bad news is information that has potential to negatively alter a patients view of their future. Both the process of breaking the news and the content have a profound effect on the patient therefore the delivery has to be well thought out. It is a critical advanced communication skill for clinicians. One can opt to use a non-structured approach,