

RESULTS: Approximately two thirds of the audiences selected the dark scarred lesion and one third of the audiences selected the dilated vesicles.

CONCLUSION: There is no standard definition or understanding of the gross appearance or histology of or what is implied by the term "powder burn." The term "powder burn" can be used with the understanding that it can be applied to at least two different gross and histologic appearances and may otherwise be a confusing term.

P-395 Wednesday, October 24, 2012

**PREGNANCY OUTCOMES FOLLOWING MYOMECTOMY WITH PLACEMENT OF POLYTETRAFLUOROETHYLENE ADHESION BARRIER.** J. L. Eaton M. P. Milad. Division of Reproductive Endocrinology and Infertility, Department of Obstetrics and Gynecology, Northwestern University Feinberg School of Medicine, Chicago, IL.

OBJECTIVE: Polytetrafluoroethylene (PTFE) is a permanent adhesion barrier that is sutured to the uterus following myomectomy. Although existing literature suggests that PTFE is superior to oxidized regenerated cellulose for adhesion prevention, its use is limited by lack of pregnancy outcome data. Our objective was to provide important preliminary data on pregnancy outcomes following myomectomy with placement of a PTFE membrane.

DESIGN: Retrospective case series.

MATERIALS AND METHODS: All women who underwent myomectomy with PTFE membrane placement between January 1, 2003 and December 31, 2009 at Prentice Women's Hospital were identified. Those with documented pregnancies following their surgical procedures were included in the final data set.

RESULTS: Sixty-eight women underwent myomectomy with PTFE membrane placement at our institution during the study period. Within this study population, 18 pregnancies were subsequently documented among 15 women (Table). There were no documented cases of preterm labor, preterm premature rupture of membranes, or uterine rupture.

Patient Characteristics and Outcomes	
Age at surgery (years)	33.9±5.4
Gravidity	.9±1.5
Parity	.1±.3
Preoperative uterine size (cm)	13.5±4.2
# (%) abdominal myomectomies	14/15 (93.3)
# (%) laparoscopic assisted myomectomies	1/15 (6.7)
# fibroids removed	3.7±2.4
Total fibroid weight (g)	281.7±192.9
# subsequent pregnancies	1.2±.4
Age at delivery (years)	36.3±5.1
# (%) spontaneous abortions	4/18 (22.2)
# (%) vaginal deliveries	3/18 (16.7)
# (%) cesarean sections	11/18 (61.1)
# (%) with adhesions seen at time of c/s	7/11 (63.6)
# (%) with barrier seen at time of c/s	3/11 (27.3)

Values represent mean±SD except where noted.

CONCLUSION: This case series demonstrated no pregnancy complications following myomectomy with PTFE membrane placement. Larger numbers of patients must be studied to ascertain the safety of pregnancy in this setting.

## LEIOMYOMA

P-396 Wednesday, October 24, 2012

**EXPRESSION AND PHOSPHORYLATION OF KEY FOCAL ADHESION PROTEINS DIFFERS IN UTERINE LEIOMYOMATA AND MYOMETRIUM, AND IS ALTERED BY TREATMENT WITH ULIPRISTAL ACETATE.** S. Chang,<sup>a</sup> P. H. Driggers,<sup>a</sup> M. Malik,<sup>b</sup> Q. Wei,<sup>a</sup> J. H. Segars.<sup>a</sup> <sup>a</sup>Program in Reproductive and Adult Endocrinology, Eunice Kennedy Shriver National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, MD; <sup>b</sup>Obstetrics and Gynecology, Uniformed Services University of the Health Sciences, Bethesda, MD.

OBJECTIVE: Previously, we reported that uterine fibroids exhibited an impaired response to mechanical cues (Norian et al., 2012). Ulipristal acetate has been shown to reduce fibroid size, but its effects on the expression of proteins involved in the transduction of extracellular forces are unknown. Here we examined expression and phosphorylation of focal adhesion kinase (FAK) and Crk-associated substrate (p130Cas) in fibroid and myometrial tissues, including fibroids from women treated with ulipristal acetate.

DESIGN: Translational Research Study.

MATERIALS AND METHODS: Untreated patient-matched fibroid and myometrial tissues (N=9) were obtained at hysterectomy, or collected from women (N=14) treated with 10 mg ulipristal acetate or placebo for 3 months under IRB-approved protocols. Immunohistochemical analysis (IHC) was performed using antisera directed against phospho-FAK [pY397], FAK, phospho-p130Cas [pY165], and p130Cas. Slides were evaluated by H-score in a blinded manner. Immunoblots of tissue extracts were quantified by densitometry. Student's t-test was used for statistical analysis.

RESULTS: Overall, IHC revealed decreased expression of total FAK in untreated fibroids vs. myometrial tissue. Immunoblot also revealed decreased phosphorylation of FAK in fibroids vs. myometrial tissue. Conversely, phosphorylation of p130Cas appeared to be increased in fibroids vs. myometrial tissue. Treatment of fibroids with ulipristal acetate showed both a qualitative increase in total FAK expression by IHC, and a quantitative increase in phosphorylation of FAK by immunoblot.

CONCLUSION: FAK and p130Cas were differentially expressed and phosphorylated in fibroid and myometrial tissues, consistent with altered mechanical signaling in fibroids. Treatment with ulipristal acetate altered expression of key proteins involved in mechanotransduction, consistent with restoration of normal mechanotransduction.

Supported by: Support provided by the Clinical Research Training Program, a public-private partnership between NIH and Pfizer, and Z01-HD-008737-11.

P-397 Wednesday, October 24, 2012

**IS PRE-ART HYSTEROSCOPIC MYOMECTOMY COST-EFFECTIVE IN WOMEN WITH SUBMUCOUS (SM) FIBROIDS SEEKING ART?** K. Devine,<sup>a</sup> S. Mumford,<sup>b</sup> J. Segars,<sup>a</sup> A. Y. Armstrong.<sup>a</sup> <sup>a</sup>Program in Adult and Reproductive Endocrinology, NICHD, National Institutes of Health, Bethesda, MD; <sup>b</sup>Epidemiology Branch, Division of Epidemiology, Statistics, and Prevention Research, NICHD, National Institutes of Health, Bethesda, MD.

OBJECTIVE: Hysteroscopic myomectomy (HM) is associated with ~16% increase in fecundability. However, financial considerations may influence the decision of whether to delay ART in order to optimize the endometrial cavity via HM. We sought to determine whether removal of submucous fibroids prior to ART was cost-effective.

DESIGN: Decision tree mathematical model with sensitivity analysis utilizing published data.

MATERIALS AND METHODS: A PubMed search determined: (1) the likelihood of ongoing ART pregnancy (OPR) in patients with SM fibroids in situ vs. post-HM; and (2) mean perioperative costs of HM. ART charges were obtained from regionally diverse clinic websites. Adjusted to 2012 dollars, median ART costs were estimated to be \$14,728, and median HM+ART costs to be \$21,710. These were used as surrogates for clinical costs. A decision tree compared: (1) ART vs. (2) HM followed by ART. Sensitivity analyses were performed over the range of OPRs.

RESULTS: ART success (OPR) in patients with SM fibroids in situ vs. in post-HM patients were obtained from three published studies as 18.5%-35.0% and 33.9%-61.0%, respectively. Sensitivity analyses determined that pre-ART HM was cost-effective when cost per ongoing pregnancy in the no-surgery group was >\$64,034, i.e. when OPR among women with in situ SM myomas was <23.0%. HM was also cost-effective whenever post-HM OPR was >51.6%, which brought cost per ongoing post-HM pregnancy to <\$42,079. Therefore, an improvement in OPR of ≥ 10.9% (23% pre-HM vs. 33.9% post-HM) was required to make pre-ART HM cost-effective.

CONCLUSION: In patients with SM fibroids, an improvement in OPR of at least 10.9% must be achieved via surgery, in order to justify pre-ART HM from a cost perspective. Since this magnitude of improvement is consistent with RCT data, these findings confirm a cost benefit for patients with SM myoma(s) pursuing ART.

Supported by: Intramural Program in Reproductive and Adult Endocrinology, NICHD, NIH.