ISP-3-9  Impact of practice variations on cesarean rates in CeNTS patients: I. Group Composition & Induction

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[Objective] To explore the effect of practice patterns on variation in cesarean rates in women with uniform, low risk characteristics.[Methods] We compared cesarean rates among 9428 Cephalic Nulliparous Term Singleton (CeNTS) women between 7 groups representing 80 obstetricians and 38 certified nurse midwives at a single, academic tertiary care center. A low risk cohort was identified using electronic medical records data from all 23,022 births between January 1, 2009 and December 31, 2011.[Results] There was little variation in the CeNTS cesarean rates (range 32.3%–32.8%, mean 31.6%) between the 7 groups despite marked variation in their practitioner compositions (range: 2.1 MD to 5.5 MD/19 CNM) with only one group demonstrating a significantly different rate of 32% (OR 1.376, CI 1.158–1.634). Cesarean rates among the groups was similar even after narrowing the population to infants weighing 2500–4000g, being in spontaneous labor, or eliminating inappropriate diagnoses (i.e. placenta previa). Being induced rather than presenting in spontaneous labor demonstrated a 64% increased risk for a cesarean (OR 1.64, CI 1.485–1.811). Neither birth weight nor gestational age affected CeNTS cesarean rates.[Conclusions] Previous data have demonstrated an increase in cesarean rates among hospitals in a single state. Given comparable cesarean rates among different provider groups in a single institution, our data suggests that hospital practice patterns play a greater role than individual practice styles in determining delivery method; this represents an opportunity for institutional quality improvement. Also, induction of labor is again found to be a significant risk for cesarean delivery.

ISP-4-1  A investigation of obesity-related gene in aromatase knockout (ArKO) mice

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[Objective] Consequently, ArKO present the possibility of being used as a model for menopausal women. The purpose of this investigation was to research for expression of obesity energy metabolism related gene in ArKO mice, ovarectomized (OVX) mice.[Methods] Wild-type mice (WT), ArKO mice, and OVX mice, each group has 6 mice.1) We had investigated each weight and food intake for all groups from 5–20 weeks. Every groups (18 weeks old) had calculated visceral fat and subcutaneous fat by computed tomography and measured feeding related gene.2) All mice were extracted obesity related gene RNA from liver and the level of the gene cluster after microarray profiling, was measured by real time-PCR.[Results] 1) ArKO,OVX mice were significantly gained body weight and increased visceral fat. While ArKO were increased in food intake, but OVX were not. Neuropeptide Y, ghrelin as a feeding related gene, were significantly increased in only ArKO,WT were not had significant change. 2) PPARγ, PGC1α as a fat energy related gene were significantly increased in ArKO, While OVX had significant differences in PPARα. No significant changes in SIRT1, but decreased GCN5 in ArKO mice.[Conclusion] We found that body weights and visceral fat were increased in 2 groups (ArKO and OVX). And it was revealed that PPARγmRNA were increased in both groups. Which results suggest the connection of Obesity and the gene.

ISP-4-2  Immune stress responses are altered by ovariectomy in female rats

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[Objective] Both deficiency of gonadal steroids and obesity alter the stress response. Although ovariectomized (OVX) rodents, used as menopause models, show these two characteristics, their stress responses have not been evaluated. OVX induced alterations of stress responses and the effects of gonadal steroids supplementation on these alterations were examined.[Methods] Experiment 1: female rats were treated with OVX or sham operation (Sham) and stress responses were compared between these two groups. Stress was induced by LPS, and then anorectic response, hypothalamic IL–1beta and TNF–alpha mRNA, and serum leptin level were measured. Experiment 2: Either estradiol and progesterone (EP) or Vehicle (Veh) was acutely injected in OVX female rats, and then stress responses were compared as like as Experiment 1.[Results] Experiment 1: Body weight in OVX rats was heavier than that in Sham rats. OVX rats exhibited an increased anorectic response, higher serum leptin level and greater increase of hypothalamic IL–1beta mRNA expression compared with Sham rats. Experiment 2: There was no differences between OVX–EP rats and OVX–Veh rats in the anorectic response, serum leptin level and hypothalamic IL–1beta mRNA expression.[Conclusion] Stress responses to immune stress were increased in OVX rats. Indirect action of gonadal steroid deficiency, such as obesity, might be related in this alteration.