IS-77  Total Abdominal Hysterectomy versus Laparoscopically-assisted Vaginal Hysterectomy versus Total Vaginal Hysterectomy

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[Objective] Total Abdominal Hysterectomy versus Laparoscopically-assisted Vaginal Hysterectomy versus Total Vaginal Hysterectomy [Methods] The subjects included 1181 patients who underwent total hysterectomies (TAH, n=465; LAVH, n=629; TVH, n=87) due to uterine fibroids or uterine adenomyosis at our hospital between January 1995 and December 2009. The mean age, parity, weight of the removed uterus, operative time, blood loss, rates of intra- and post-operative complications, length of post-operative hospital stay, leukocyte count, and CRP and hemoglobin levels were compared. [Results] The operative time was significantly longer in the LAVH group than the other two groups. Blood loss was significantly greater in the TAH group than the LAVH and TVA groups. The rates of intra- and post-operative complications were significantly higher in the TAH group than the LAVH group. The CRP level and leukocyte count were significantly lower in the LAVH group than the TAH and TVH groups. [Conclusion] Although the three surgical methods differ with respect to indications and cannot be compared equally, we recommend LAVH as the method for hysterectomy because it can be applied to nulligravidas or patients with relatively large uteri. LAVH is also less invasive than TAH and TVH, but the operative times are longer and there are risks for complications specific to laparoscopically-assisted surgery.

IS-78  Male reproductive tract CD52 (mrt-CD52) suppresses complement activation via binding Clq

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[Objective] Human CD52 is a glycosylphosphatidylinositol (GPI) anchored peptide expressed in lymphocytes as well as the male reproductive tracts (mrt). mrt-CD52 is a pathogenic antigen for immunological infertility that is recognized by a monoclonal antibody (Mab H6-3C4) specifically the N-linked carbohydrate. Mab H6-3C4 has strong sperm immobilizing activity with complement. In this study we focused on the Clq molecule as a binding component to mrt-CD52. [Methods] We carried out immunoprecipitation analysis by incubating a reaction mixture of mrt-CD52, human serum for Clq source and Mab H6-3C4. The immunoprecipitates was analyzed by a western blotting with the ECL method probed with anti Clq antibody. To isolate the carbohydrate moiety, mrt-CD52 was treated with N-glycosidase F (NGF) followed by fractionation in ConA sepharose. [Results] Immunoprecipitate formed from the reaction mixture of mrt-CD52, human serum and Mab H6-3C4. The carbohydrate moiety of mrt-CD52 reacted with human serum and Mab H6-3C4 and formed immunoprecipitate. The Clq molecule (29 kDa) was detected in both immunoprecipitates. [Conclusion] These results suggest that the carbohydrate moiety of mrt-CD52 suppress complement activation via binding to Clq and protect sperm from complement attack in female reproductive tracts.

IS-79  Activation of heat shock protein 90 (hsp90) in the ovary during stress-induced polycystic ovarian syndrome (PCOS) in the rat

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Objective: Polycystic ovarian syndrome (PCOS) is the most common endocrine disorder affecting infertile women of reproductive age. This study evaluated the activation of heat shock protein 90 (Hsp 90) during the formation of stress-induced polycystic ovaries. Methods: Female Sprague-Dawley rats (180-200 g) were subjected to one of two stress-inducing conditions: animals were either treated with adrenocorticotrophic hormone (ACTH) or were exposed to cold stress. Non-treated rats sampled during proestrus or diestrus served as controls. Blood samples were collected from the left ventricle of anesthetized rats and concentrations of follicle-stimulating hormone (FSH), luteinizing hormone (LH), estradiol, testosterone, and corticosterone measured in all rats. The expression of mRNA for androgen receptor (AR), estrogen receptor-α and- β (ER-α and ER-β), nerve growth factor receptor (NGFR), and glucocorticoid receptor (GR), and protein expression for heat shock protein 90 (Hsp 90) were also assessed in the rat ovaries. Results: Stress did not affect androgen receptor expression, decreased estrogen and nerve growth factor receptor expression, and increased glucocorticoid receptor expression in the ovary. Ovarian Hsp 90 protein expression was increased in rats treated with ACTH or cold stress. Serum FSH levels were reduced and testosterone and corticosterone levels increased by stress, whilst LH and estradiol levels were similar to diestrous and proestrus controls respectively. Conclusions: The results indicate that stress, via the activation of ovarian Hsp 90, and changes in steroid hormone receptor expression and serum reproductive hormone levels, may be a possible factor in the induction of polycystic ovaries in rats. Keywords: Cold stress, Polycystic ovary, Rat, ACTH, Heat shock protein 90.