P1-IS-20  HGF enhances invasion of endometrial cancer with TNF-α in estrogen milieu

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Purpose: Hepatocyte growth factor (HGF) enhances invasion of endometrial cancer cells, maybe through not only by a paracrine effect, but also by an autocrine effect in stromal cells enhancing activation process of MMPs (Matrix Metalloproteinases) and inducing the MMP-9 gene. Estrogen enhances the invasive characteristics of endometrial cancer, and this is comparatively increased by the presence of HGF. This study was performed to clarify this HGF effect on the invasion mechanism of endometrial cancer.

Material and Method: A HGF antagonist, NK4 was introduced to the 3 dimensional culture system with stromal cells co-cultured with HEC-1A cells. Then the endometrial cancer cell invasion study was performed by invasion assay in Boyden's chamber. The HGF signal cascades (c-Met-Akt signal cascades) in co-cultured HEC-1A was checked by Western blot, and also several factors and cytokines which may be modulated by estrogen were studied by RT-PCR. Finally, the level of HGF secretion in stromal cells according to TNF-α was measured.

Results: NK4 blocked estrogen-induced endometrial cancer invasion consistently. Among the c-Met-Akt signal cascades in co-cultured HEC-1A cell, p-Akt 473 and p-Akt 308 were enhanced by estrogen. Among the growth factors and cytokines, TNF-α only was up-regulated in mRNA level by estrogen in the co-cultured cancer cells, although the expression of many other HGF inducing factors remain unchanged. HGF was induced regardless of concentration dependency of TNF-α, and the treatment of TNF-α resulted in 4-fold increase of HGF secretion.

Conclusion: In estrogen milieu the paracrine interaction between endometrial cancer cells and stromal cells, and autocrine functions were enhanced. HGF induces and enhances MMPs of stromal cells, and also activates c-Met receptors on cancer cell membranes, then through c-Met-Akt signal cascades enhances TNF-α which causes a positive feedback to HGF. Finally, HGF enhances the invasion of endometrial cancer with TNF-α in an estrogen milieu.

P1-IS-21  Investigation of serum secretory leukocyte protease inhibitor (SLPI) level in uterine corpus cancer.

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[Objective] Secretory leukocyte protease inhibitor (SLPI) is often associated with induction proliferation and promotion malignancy of epithelial cell cancers. In this study, we evaluated serum SLPI levels in uterine corpus cancer. [Methods] Preoperative blood samples from 54 uterine corpus cancer patients during 2003-2005 were collected with informed consent, and blood samples from 24 healthy women were donated and used as controls. Serum SLPI levels were measured by ELISA. [Results] The mean values of serum SLPI concentration in control and uterine corpus cancer samples was 40.7 and 49.2ng/ml, respectively. In the control samples, there was a significant difference between pre-menopausal (35.9ng/ml) and post-menopausal (49.1ng/ml) (p<0.05). The SLPI levels were 44.2ng/ml in atypical hyperplasia, 48.3ng/ml in endometrioid adenocarcinoma, 44.8ng/ml in clear cell carcinoma, 67.5ng/ml in serous adenocarcinoma, and 61.7ng/ml in carcinosarcoma. Patients with serous adenocarcinoma and carcinosarcoma had significantly higher (p<0.01) serum SLPI levels than endometrioid adenocarcinoma patients. [Conclusion] These preliminary results indicate that patients with serous adenocarcinoma and carcinosarcoma of uterine corpus cancer have high level serum SLPI. This study suggests that serum SLPI may be a useful biomarker in tumors of these histological types.

P1-IS-22  SEROUS FLUID: A RARE CONTENT OF MATURE CYSTIC TERATOMA

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Mature cystic teratoma, one of the most common benign ovarian tumours, found in a 19 years, regularly menstruating, unmarried girl, which was bilateral and huge (40x30 cm) on one side and 5x6 cm on the other side and on cut section found to have haemorrhagic serous fluid (36 liters) instead of sticky keratinaceous and sebaceous material had undergone unilateral salpingo oophorectomy and contra lateral cystectomy preserving about 80% of normal ovarian tissue is presented here.