
As a model to examine the pathophysiology of human endometriosis, attempts were made to surgically induce the disease in nude mouse back by heterotransplanting artificial human endometrium using permeable membrane (PM). Results as follows: 1) heterotransplantation was able to be seen using PM, no endometrial tissues were seen using tissue extracts and separated endometrial cells. 2) it is easy to prepare this in vitro model. 3) it is easy to examine a size & contents of endometrial cyst. 4) it is easy to study the hormonal regulation of this tissue. Furthermore as it is easy to evaluate the effects of drugs for endometriosis, this model can be used to study the aspects of human endometriosis.


Using SD rats, the endometrium was transplanted to the abdominal wall for formation of cysts and the drugs (ethanol and Danazol dissolved in ethanol) were directly injected into the cyst and the influence of the drugs on the transplanted endometrium was studied histologically. As for clinical application, 25 cases (11 cases desirous of having a child) were used as the subjects to study the clinical course and prognosis.

As a result of the animal experiment, it was suggested that addition of Danazol, compared with administration of ethanol alone, slightly increased the local effect of ethanol such as necrosis, falling off and disappearance of the epithelium. In the clinical application, establishment of pregnancy was recognized in 3 out of 6 cases with puncture of chocolate cyst plus injection of the drugs desirous of having a child and 2 out of 5 cases with laparotomy plus direct application of the drugs. To date, symptoms have disappeared in all the cases and there has been no evident sign of recurrence.


A retrospective study was performed to evaluate the diagnostic value of serum autoantibody (AA) or hysteroscopy in adenomyosis. The subjects consisted of 46 cases, who were proven to have adenomyosis histologically. The methods employed were levels of serum CA125, ultrasonography (USG), levels of serum AA or hysteroscopy. The cases who exceeded 50 U/ml in serum CA125 are regarded as adenomyosis. Diagnosis by hysteroscopy was made by the presence of dilated opening of glandular os or abnormal vessels. The auto-antibodies measured are anticardiolipin IgG or IgM antibodies (CL-G, CL-M), antiphosphatidyllositol IgG antibody (PI-G) and the other three phospholipid antibodies. USG revealed the accurate diagnosis of adenomyosis in 24 (52.2%) out of 46 cases. The cases who exceeded 50 U/ml in serum CA125 levels are 28 (60.9%). Surprisingly, 20 (62.5%) of 32 cases had at least one antibody against phospholipids. The most frequently positive one was PI-G, followed by CL-G. Hysteroscopy showed positive findings in 28 cases (75.7%) of 37 cases. When the above four methods were employed together in diagnosing 29 cases, only one case showed negative against them, consequently reaching 96.6% of coincident diagnosis. In conclusion, hysteroscopy or autoantibody was quite useful in the improved diagnosis of adenomyosis.