Introduction

Hiroshi Hoshiai, Osaka-Sayama

Yuji Taketani, Tokyo

Naoki Terakawa, Yonago

Endometriosis is commonly thought to interfere in some way with normal reproduction. Unfortunately, there is no conclusive evidence to date to explain the mechanism of how endometriosis affects infertility. The Fourth Japan Conference on Endometriosis was held on April 28, 2001, at Hakone, Japan, to discuss the latest research and explore possible explanations for this association. This supplement presents the contributions of seven distinguished scientists in the field of reproductive medicine to this year's topic, 'Current Perspectives on Endometriosis and Infertility.'

In his first presentation, Dr. Craig Witz, Department of Obstetrics and Gynecology, University of Texas Health Science Center, San Antonio, Texas, discussed whether or not there is a cause-and-effect relationship between endometriosis and infertility. The answer to this question is very important, as it may direct whether or not aggressive clinical treatment should be instituted for early stage endometriosis to increase pregnancy rates.

Some cases of surgical removal of endometriotic lesions in symptomatic women are considered incomplete due to difficult lesions or differences in the surgeon's skill. The effect of this residual endometriotic tissue on postsurgical fecundity is not known. Dr. Hiroshi Suginami, Kyoto National Hospital, presented his findings on the influence of residual lesions in women with incomplete surgical removal of endometriosis. He also discussed new procedures to make removal of deep rectal endometriosis and deeply invading pelvic endometriosis easier.

Assistant Professor Tomio Iwabe, Tottori University, explored the role of cytokines in endometriosis-associated infertility by measuring interleukin-6 and tumor necrosis factor- α in peritoneal fluid from women with and without endometriosis. He also examined the effect of IL-6 on sperm motility.

It is important to be able to estimate a woman's probability of pregnancy to select appropriate clinical manage-

ment. Assistant Professor Takashi Murakami, Tohoku University, presented his findings on the factors associated with the prediction of pregnancy in infertile women with endometriosis.

Laparoscopic treatment remains the gold standard for diagnosis and treatment of many forms of infertility. Assistant Professor Yutaka Osuga, University of Tokyo, shared his findings on the influence of anatomic pathologic features such as tubal adhesions and endometriosis on pregnancy rates after laparoscopic treatment.

In a related study, Assistant Professor Akira Fujishita, Nagasaki University, examined whether pelvic endometriosis and ovarian endometrioma affect fertility. His group used two different rating scales to assess the extent of disease, and also assessed whether expectant, medical, or surgical therapy of ovarian endometrioma affected the pregnancy rate.

Associate Professor Hidekazu Saito, Yamagata University, reported on his findings concerning oocyte quality from endometriotic ovaries and implantation rate. They evaluated the incidence of apoptosis, cell cycle, and oxidative stress in the granulosa cells as a measure of oocyte quality.

In his second presentation, Dr. Witz reviewed the pathogenesis of endometriosis and examined the different theories of histogenesis. Dr. Witz also discussed mechanisms of transmesothelial migration and invasion of the peritoneum, and the possible role of adhesion molecules in the development of endometriosis.

We are pleased to provide this opportunity to our readers to share in the presentations and lively discussions featured at the Fourth Japan Conference on Endometriosis. An understanding of the complex relationship between endometriosis and fertility will lead to better treatments for reproductive disorders and better outcomes for infertile women.