



Special Issue “Impact of Endometriosis on Women’s Health”

Osamu Wada-Hiraike ¹ and Akira Iwase ^{2,*}

¹ Department of Obstetrics and Gynecology, Faculty of Medicine, The University of Tokyo, Bunkyo, Tokyo 113-8655, Japan; osamuwh-ky@umin.ac.jp

² Department of Obstetrics and Gynecology, Gunma University Graduate School of Medicine, 3-39-22 Showa-Machi, Maebashi 371-8511, Japan

* Correspondence: akiwase@gunma-u.ac.jp

Endometriosis is one of the most common diseases in women of reproductive age, and although there are many theories to explain this enigmatic disease, such as reflux theory, metastasis theory, and metaplasia theory, there is still no single theory that can wholly explain the pathogenesis of the disease, and it is considered a mysterious disease until now. Endometriosis often manifests within the ovarian endometrioma, and the endometriotic lesions are mainly found in the pelvis, though extra pelvic lesions can appear, including adenomyosis, deep endometriosis, and peritoneal endometriosis. Pathologically, endometriotic tissue is defined as the growth of the endometrial tissue in the abdominal cavity, and etiologically, endometriosis occurs in menstruating women. Therefore, the presence of estrogen is crucial for the development of endometriosis. Endometriosis is an important disease that causes infertility and dysmenorrhea, and it has recently been noted that endometriosis significantly worsens quality of life (QOL) and adversely affects labor productivity. The pathophysiological cause of endometriosis is yet to be elucidated, but it has been suggested to be associated with the occurrence of dysmenorrhea during post-pubertal periods. In addition, many reports in recent years have suggested that the occurrence of endometriosis is associated with pregnancy-related complications, including threatened labor and placenta previa, osteoporosis, cancer, and mental disorders. The seven papers recruited for this Special Issue, “Impact of Endometriosis on Women’s Health”, review the current knowledge of diseases associated with endometriosis and describe the future perspectives of clinical and experimental studies. They also raise many aspects related to the clinical issues associated with endometriosis.

Nakamura, T. et al. demonstrated the difficulties of early diagnosis of endometriosis and the choice of treatment for endometriosis in adolescent girls [1]. As demonstrated in another paper, ovarian endometriotic cysts and fibrotic scars are less common in adolescents, and superficial peritoneal disease is difficult to distinguish [2]. Surgery to remove lesion and drugs for endometriosis are reported to be effective in resolving pain; however, subsequent hormonal therapy can be controversial due to its side effects. Therefore, Ota, I. et al. demonstrated that low-dose dienogest can be an effective alternative choice of treatment [3]. They demonstrated gonadotropins and the bone metabolism markers after initiating low-dose dienogest treatment in women aged 10–24 years with dysmenorrhea and irregular menstruation. Fortunately, TRACP-5b, an osteoclast marker, and BAP, an osteogenesis marker, did not change 3 months later.

After the removal of ovarian endometrioma, a decline in ovarian reserve is inevitable due to the nature of the stripping surgery. Kitajima, M. et al. demonstrated the importance of preserving ovarian reserve when performing ovarian surgery [4]. They also discussed that early intervention with surgery and/or medical treatment may be beneficial, though it still remains a matter of concern for the future. Ota, Y. et al. [5] and Katakura, M. et al. [6] reported a novel technique for the treatment of adenomyosis. The former demonstrated utility of elastography for the surgery of deep endometriosis and adenomyosis. Illustrating the rigidity of tissue is currently widely used and they completely resected lesions by



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the aid of elastography to clearly visualize the lesions. The latter demonstrated a case of juvenile cystic adenomyosis, i.e., a rare entity of adenomyosis. Juvenile cystic adenomyosis, mainly treated by surgery, and a laparoscopic approach using scissor forceps were effective in this case.

Later in life, a decline in ovarian reserve can result in a decreased bone mineral density due to reduced levels of estrogen. We reviewed this issue given that the use of resveratrol can possess dual roles in the treatment of endometriosis and increase bone mineral density [7]. It is expected that resveratrol (which is per se a natural product) does not possess harmful effects. Another issue is the occurrence of malignancies. Inoue, N. et al. reported that extraovarian malignancy lesions of endometriosis are observed in the intestine, abdominal scar, vagina and vulva, peritoneum and deep endometriosis, urinary tract, uterine cervix, and others. The most common tumor site was the intestine; histologically, endometrioid carcinoma was the most frequent type. Furthermore, the relation between occurrence and estrogen therapy was discussed [8].

In summary, this Special Issue successfully describes clinical problems about endometriosis, which can open up new possibilities for the optimal treatment for endometriosis.

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