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Case Report

Tubal Endometriosis Diagnosed within One Month after Menarche: A Case Report

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YAMAMOTO, K., MITSUHASHI, Y., TAKAIKE, T., TAKASE, K., HOSHIAI, H. and NODA, K. *Tubal Endometriosis Diagnosed within One Month after Menarche: A Case Report.* Tohoku J. Exp. Med., 1997, **181** (3), 385-387 —— A 13-year-old nulligravida girl, 158.5 cm in height and 76.0 kg in body weight, came to our department complaining of continuous right lower abdominal pain. One month earlier, an ovarian cyst in the right ovary, about 3 cm in diameter, was found when she underwent appendectomy at another hospital, but was left untreated. Menarche occurred at the age of 13 years and 1 month, which was after the appendectomy and 24 days before the present operation. Right hematosalpinx with peripheral obstruction and a para-ovarian serous cyst on the same side were diagnosed, and therefore right salpingectomy with para-ovarian cyst resection was performed. The bilateral ovaries and uterus were completely normal by inspection. The post operative histological examination confirmed hematosalpinx and revealed tubal endometriosis. ———— endometriosis; adolescent

Although several mechanisms have been proposed to explain the pathogenesis of endometriosis, a definitive theory on the overall process has yet to be established. Significant controversy also exists regarding the age of patients at onset, and the incidence of the disease (Hoshiai et al. 1993). There are numerous case reports of endometriosis occurring in adolescent girls. Some studies have suggested that the incidence of endometriosis in teenage girls may be higher than previously anticipated. Endometriosis occurring shortly after menarche is found frequently but not exclusively in young girls with mullerian anomalies causing outflow tract obstruction. It may occur in girls as young as 10 to 12 years of age (Suginami 1991).

In the present study, we describe in detail a case tubal endometriosis without any mullerian anomaly, histologically confirmed and diagnosed at one month after menarche.

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Case Report

A 13-year-old nulligravida girl, 158.5 cm in height and 76.0 kg in body weight, came to our department complaining of continuous right lower abdominal pain (Feburary 20, 1992). The pain had no relation to her menstrual cycle. She did not complain of dysmenorrhea and hypermenorrhea. One month earlier, she underwent appendectomy at another hospital (January 21, 1992). During the operation, an ovarian cyst in her right ovary, about 3 cm in diameter, was found but was left untreated. The post-appendectomy course was uneventful. Otherwise, her past medical and surgical histories were irrelevant. Menarche occurred at the age of 13 years and 1 month (Feburary 10, 1992).

At our department, routine examinations for ovarian tumor including pelvic examination, ultrasonography, chemical tumor markers, and MRI were performed. The results of MRI suggested a small ovarian cyst about 3 cm in diameter. The results of tumor chemical markers were negative. α-Feto-protein was 2.0 ng/ml, CA 12-5 was 27 IU/ml, and CA 19-9 was less than 6 IU/ml. Based on these clinical findings, laparotomy was performed (March 5, 1992). A right hematosalpinx with peripheral obstruction and an ipsilateral para-ovarian serous cyst were found, and consequently right salpingectomy with para-ovarian cyst resection was performed. The bilateral ovaries and uterus were completely normal by inspection. The postoperative histological examination confirmed hematosalpinx with tubal endometriosis (Fig. 1). The postoperative course was uneventful. After the operation, her menstrual cycle was normal and adolescent.

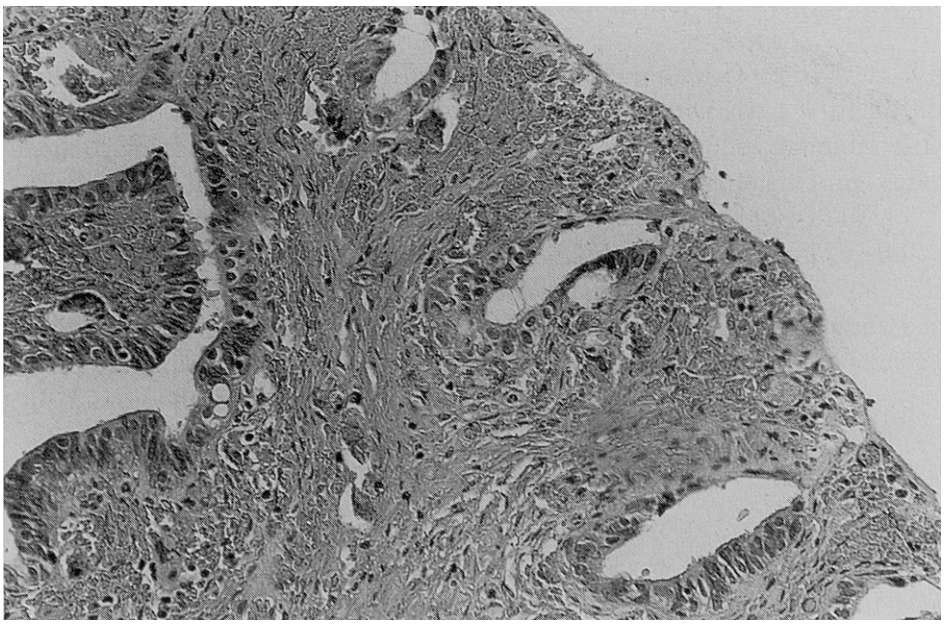

Fig. 1. Endometriotic glands with a thin rim of endometrial stroma lie beneath the endosalpingeal epithelium. Hemosiderin laden macrophages are seen around endometriotic glands.

Discussion

Endometriosis occurring shortly after menarche has been frequently reported and it is not always associated with mullerian anomalies which cause outflow tract obstruction. Schifrin et al. (1973) reported 15 cases of adolescent endometriosis verified at operation; six of them had mullerian anomalies while the other nine did not. According to their data, the time intervals between menarche and surgery in the two groups were 3.0 ± 1.9 and 6.6 ± 1.9 years (mean $\pm$ S.D.), respectively; the former being significantly shorter than the latter ($p < 0.05$). This fact suggested that regurgitation of menstrual blood may play an important role in the pathogenesis of endometriosis. Moreover, some time after menarche may be required to establish endometriosis. Fallon (1946) reported that endometriosis develops at least five years after menarche. The mean interval between menarche and diagnosis of endometriosis has been estimated as 52 months. The youngest patient ever reported to have endometriosis was ten and half years old, and she had menarche five months earlier (Clark 1948). The present case was diagnosed histologically as endometriosis within one month after menarche. This may be the shortest interval between menarche and diagnosis of endometriosis reported. In our experience, endometriosis progresses at a mean rate of 0.3 point per month according to the revised evaluation of the American Fertility Society which may explain most reported cases of endometriosis in adolescent girls (Hoshiai et al. 1993). However, the interval in this case was too short for any regurgitated menstrual blood to be implanted according to the implantation theory. Our case suggests that the coelomic metaplasia theory with some triggering factor should be considered in the pathogenesis.

We think that this report will serve as a reference for discussing the pathogenesis, and establishing guidelines for treatment of young women who must preserve their reproductive potential after diagnosis of endometriosis.

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