

# Examination of the usefulness of fertility-sparing surgery for pediatric ovarian teratoma

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## Abstract

[Background] Ovarian teratomas are the most common ovarian tumors in children. Fertility-sparing surgery (FSS) is often recommended owing to its advantage of fertility preservation. We examined the validity of FSS in pediatric patients with ovarian teratomas. [Procedure] We retrospectively reviewed the medical records of patients who underwent initial surgery for ovarian teratomas in our department between 1972–2021. Patients were divided into two groups: oophorectomy (OVX) group and FSS group. Clinical characteristics, perioperative characteristics, and outcomes were compared between the groups. [Results] Forty-six patients underwent initial surgery (OVX: 25 patients; FSS: 21 patients). There were no differences between the groups in terms of age, pathological diagnosis, affected side, ovarian torsion, postoperative complications, recurrence rate, or length of postoperative follow-up. Regarding pathological diagnosis, immature teratomas were found only in the OVX group ( $p = 0.0161$ ). The tumor size was larger in the OVX group ( $p = 0.0104$ ). Regarding perioperative findings, operation time was longer in the FSS group ( $p = 0.0071$ ) and bleeding volume was higher in the OVX group ( $p = 0.0070$ ). The number of days until the start of oral intake and the length of hospital stay postoperatively were shorter in the FSS group ( $p = 0.0002$  and  $p < 0.0001$ , respectively). [Conclusion] We demonstrated the advantages of FSS, including its minimally invasive approach and comparable outcomes in terms of tumor recurrence; the operation time was longer. Since both FSS and OVX are associated with a risk of tumor recurrence, long-term follow-up in anticipation of adult transition is necessary.

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