INTRA-OPERATIVE OOCYTE RETRIEVAL FOR FERTILITY PRESERVATION DURING OPEN PELVIC SURGERY

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Abstract Body

Objectives

In ovarian cancer or pelvic metastatic tumor, a transvaginal ultrasound-guided oocyte retrieval is an unavailable option because of the risk of cancer cells spillage and additional metastasis. Intra-operative oocyte retrieval during transabdominal cancer staging surgery would be suggested to cancer patients as a safe strategy for preserving fertility.

Methods

A total of 29 patients aged between 16 and 40 who underwent intra-operative oocyte retrieval during staging surgery at Seoul National University Bundang Hospital from 2014 to 2022 were enrolled for study and controlled ovarian stimulation outcomes were analyzed.

Results

Among 29 patients who underwent intra-operative oocyte retrieval, 27 unmarried women had oocyte cryopreservation and 2 married women had embryo cryopreservation. The final pathologic diagnoses were 14 cases of ovarian cancer, 1 case of double primary of ovarian and endometrial cancer, 2 cases of cervical cancer, 4 cases of borderline ovarian tumor, 7 cases of benign ovarian tumor, and 1 case of Burkitt lymphoma. Three patients had neo-adjuvant chemotherapy and no significant relationship with oocyte retrieval. Oocytes retrieval rate was 82.8% (24/29). Among 24 women, 20 patients succeeded to oocyte cryopreservation, and 2 patients proceeded to embryo cryopreservation; 3 and 4 embryo cryopreserved in each patient. Cryopreservation rate was 91.7% (22/24). The median number of retrieved oocytes was 5 [min 1, max 22], and the median number of cryopreserved oocytes was 4 [min 1, max 17]. Anti-Müllerian Hormone (AMH) and a type of ovarian stimulation were significant factors for oocyte acquisition between success and failure group. (AMH: 3.86±3.62 vs 1.30±2.21, p=0.023; ovarian stimulation: recombinant Follicle Stimulating Hormone: 87.5% vs 40.0% (p=0.046)).

Conclusion

For women with gynecologic cancer planning to have staging surgery, intra-operative oocytes retrieval can be an efficient and safe option for preserving fertility.