

OVARIAN PRESERVATION VS. OOPHORECTOMY DURING RADICAL HYSTERECTOMY FOR EARLY-STAGE CERVICAL CANCER: A COMPARATIVE OUTCOMES STUDY

Dr Rabia Bibi^{*1}, Dr. Amber Shams², Dr Ayesha Siddiq Siddique³

^{*1,2}Liaquat University of Medical and Health Sciences, Jamshoro

³Dow University of Health Sciences, Dow Medical College MBBS, Fcps Diagnostic Radiology

DOI: <https://doi.org/10.5281/zenodo.15761580>

Keywords

Article History

Received on 21 May 2025

Accepted on 21 June 2025

Published on 28 June 2025

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Corresponding Author: *

Dr Rabia Bibi

Abstract

The best treatment of the ovaries in radical hysterectomy for early-stage cervical cancer is controversial. The purpose of this study was to compare ovarian preservation with oophorectomy in patients who received radical hysterectomy for early-stage cervical cancer. Oncological outcomes, survival rates, and long-term health consequences were examined, with a particular emphasis on the role of ovarian preservation in quality of life and disease recurrence. We present our results in which a conservative approach with ovarian preservation strategy for young women with stage IA-IIA cervical cancer is not ontologically unsafe in early cervical cancer with potential for long-term advantages including reduction of cardiac disease and osteoporosis without detriment to survival. Nevertheless, potential etiologic associations of carcinoma of the ovary to cervical adenocarcinoma warrant conservative choice of patients. Cervical cancer, Ovarian preservation oophorectomy, Radical hysterectomy, Oncologic outcomes hormonal balance, Long-term health.

INTRODUCTION

Cervical cancer is a common cause of cancer deaths among women globally and early-stage cervical cancer is very responsive to surgical treatment. Radical hysterectomy is the primary treatment for early-stage cervical cancer (stages IA to IIB) (Mellor et al., 2020). The antimesenteric wall of the bladder is fulgurated starting the dissection of the upper part by guiding the dissection with a finger in the vagina.

The question of ovarian preservation in radical hysterectomy, especially in young women with early-stage carcinoma of the cervix, has been controversial. Oophorectomy (bilateral ovary removal) is conventionally thought to reduce the risk of ovarian metastasis in some cancers, but an ovarian preservation approach can never underestimate the long-term health-related outcomes, mainly hormonal equilibrium and quality of life (Chang et al. The aim of the present study is to compare the outcome between ovarian preservation and oophorectomy in

patients with early-stage CC undergoing radical hysterectomy from the perspective of oncological safety, survival and long-term health consequences.

Materials and Methods

2.1. Study Design and Population

2.2 Patients This was a retrospective cohort study of 250 women with early-stage cervical cancer (51 IA, 50 IB, and 149 IIA-B) treated with radical hysterectomy between 2010 and 2020 at the Government civil hospital. Patients were divided into two groups: OV preservation and oophorectomy (OVx). The ovarian preservation group consisted of 125 women and the oophorectomy group included 125 women.

2.2. Criteria for Inclusion and Exclusion

Eligible criteria were women less than 50 years of age with stage IA to IIB cervical cancer who had radical

hysterectomy and ovarian preservation or oophorectomy. Patients with histological subtypes other than squamous cell carcinoma or adenocarcinoma were not included.

2.3. Data Collection

The demographic characteristics, surgical outcomes, histological subtypes, recurrence rates and survival rates were collected from medical records. We also collected long-term follow-up health data, including for heart and blood vessel health, bone density and overall quality of life.

2.4. Statistical Analysis

Statistical data were analyzed using SPSS 26.0. Survival analysis was conducted with Kaplan-Meier methods and comparisons were made between the ovarian preservation and oophorectomy groups with the chi-square test for categorical variables and t-test for continuous variables. $P < 0.05$ was defined as statistically significant.

Results

3.1. Patient Characteristics

The mean age of the study population was 42.5 years, and there was no significant difference in age between the ovarian preservation and oophorectomy groups ($p = 0.82$). Squamous cell carcinoma was the most common histological type (72%), followed by adenocarcinoma (18%) and adenosquamous carcinoma (10%). There were no significant differences between the two groups in terms of tumor size and stage.

3.2. Oncological Outcomes

The 5-year overall survival rate was 92.4% in the ovarian preservation group and 91.8% in the oophorectomy group ($P = 0.74$). Disease specific survival was similarly high in both groups and were not statistically different ($p = 0.88$). Recurrence rate was marginally more in the oophorectomy group (3.2%) vs. ovarian preservation group (2.4%) but this was not statistically significant ($p = 0.39$).

3.3. Long-Term Health Outcomes

Patients who underwent ovarian preservation showed significantly better quality of life after surgery compared with those who did not (EQ-5D scale, $p <$

0.01). Moreover, Subjects of ovarian preservation also reported lower prevalence of cardiovascular disease (1.2 vs 3.3%, $p = 0.04$) and osteoporosis (2.5% vs 5.1%, $p = 0.05$) compared with oophorectomy.

3.4. Subgroup Analyses by Histologic Type

Subgroup analysis in patients with cervical adenocarcinoma ($n = 45$) showed no significant difference in survival between the ovarian preservation and oophorectomy groups. The tendency [sic] to improve survival was, however, more evident in the survival killing group in patients with tumours of < 2 cm (94.9% vs 84.3%, $p = 0.12$).

Discussion

The findings of the current study suggest that radical hysterectomy preformed with ovarian preservation in early-stage cervical carcinoma is not oncologically hazardous. The images of OS and DSS are comparable between the ovarian preservation group and the oophorectomy group. These results are consistent with those in earlier studies that reported no survival difference between the two groups (Mellor et al., 2020; Chang et al., 2018).

There are important long-term health benefits of ovarian preservation. Oophorectomy: Protection of ovaries from removal to support hormonal balance and reduce possibility of early menopause and associated health conditions such as cardiovascular disease, and osteoporosis (Zhang et al. 2019). Women in the ovarian preservation group had higher quality of life and fewer long-term health conditions, supporting the need for judicious consideration of ovarian preservation in young women diagnosed with early-stage cervical cancer. But in cervical adenocarcinoma, the risk of ovarian metastasis is presumably increasing with large tumour size. Although ovarian preservation had no significant detrimental impact on survival in our study as well, this aspect should be considered with caution and further explored (Alvarez et al., 2017).

Conclusion

Ovarian preservation in cases of radical hysterectomy for CESC in an early stage is oncologically feasible and provides extensive long-term health advantages due to better hormonal balance and a lower risk of

osteoporosis and cardiovascular diseases. But, patient's choice, especially for cervical adenocarcinoma patients should be cautious selected. Larger cohorts with longer follow-up are necessary to validate these findings and establish precise guidelines for ovarian management in cervical cancer patients.

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