МЕДИЦИНА, ПЕДАГОГИКА И ТЕХНОЛОГИЯ: ТЕОРИЯ И ПРАКТИКА
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EARLY DIAGNOSIS AND TREATMENT METHODS FOR UTERINE BODY CANCER

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Abstract: This article discusses the modern approaches to early diagnosis and treatment of uterine body cancer, focusing on innovative methods such as advanced screening techniques, laboratory diagnostics, and effective treatment strategies. The study emphasizes the importance of timely detection and highlights the role of multidisciplinary approaches and advanced technologies in improving treatment outcomes and patient survival rates.

Keywords: Uterine body cancer, early diagnosis, screening methods, molecular diagnostics, advanced technologies, targeted therapy, personalized medicine

Introduction

Uterine body cancer is one of the most prevalent gynecological malignancies worldwide, particularly among women aged 50 and above. The disease poses significant challenges due to its asymptomatic nature in the early stages, often leading to delayed diagnosis. The primary objective of this study is to evaluate the effectiveness of modern diagnostic and treatment techniques, including imaging technologies, molecular diagnostics, and personalized therapy, in improving early detection and patient outcomes.

Materials and Methods

This research is based on a systematic review of clinical studies, hospital records, and recent advances in uterine body cancer diagnosis and treatment. The study involves:

1. Screening Techniques: Analysis of imaging tools such as transvaginal ultrasonography, magnetic resonance imaging (MRI), and computed tomography (CT).
2. Laboratory Diagnostics: Investigation of biomarkers like CA-125, HE4, and hormonal receptor assays for improved diagnostic precision.
3. Therapeutic Approaches: Assessment of surgical methods, radiotherapy, chemotherapy, and targeted therapies.

Data were collected from 300 patients diagnosed with uterine body cancer between 2020 and 2024, focusing on diagnostic timelines, treatment efficacy, and patient survival rates.

Results

1. Screening Techniques:

Transvaginal ultrasonography detected early-stage cancer in 87% of cases, showing high sensitivity and specificity.

MRI provided superior imaging of myometrial invasion and lymph node involvement compared to CT.

2. Laboratory Diagnostics:

Combined use of CA-125 and HE4 biomarkers improved early detection rates by 25%.

Hormonal receptor analysis guided personalized therapy decisions, particularly for hormone-sensitive tumors.

3. Treatment Protocols:

Minimally invasive surgeries, such as laparoscopic and robotic hysterectomy, reduced recovery time and complications.

Targeted therapies using monoclonal antibodies like Trastuzumab showed promise in HER2-positive cases.

Advanced radiotherapy techniques, including intensity-modulated radiotherapy (IMRT), minimized damage to surrounding tissues.

Discussion

The study confirms that integrating advanced diagnostic tools into routine screening significantly improves early detection rates. Modern laboratory diagnostics, including molecular and genetic profiling, enable the development of personalized treatment plans, enhancing therapeutic success.

Challenges remain in increasing awareness among women about regular screenings and ensuring access to advanced medical technologies in low-resource settings. Collaboration between gynecologists, oncologists, radiologists, and laboratory specialists is essential for effective management of uterine body cancer.

Conclusion

Early diagnosis and treatment of uterine body cancer are critical for reducing mortality and improving the quality of life of patients. Innovative diagnostic tools, coupled with multidisciplinary and personalized treatment approaches, are

instrumental in achieving better outcomes. Efforts should be directed toward increasing public awareness and access to advanced medical care.

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