



The Incidence of Epithelial Ovarian Cancer in Reproductive Age women in Ukraine and Ukraine's Neighbour Countries

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Abstract

A considerable variation of the incidence of ovarian cancer (OC) is observed around the world with the highest rate being registered in Central and Eastern Europe.

The aim of this work was to analyze the incidence of EOC in reproductive age women in Ukraine and Ukraine's neighbour countries.

Materials and methods: Two sources were used for cancer incidence data reported in this article: National Cancer Registry of Ukraine and GLOBOCAN data

Results: In Ukraine reproductive age patients constituted 8,05% and epithelial ovarian cancer accounted for 6.47%. In Ukraine's neighbours, the highest rates of reproductive age patients were registered in Moldova (17,78%), Belarus (10,99%) and Russian Federation (9,67%). In reproductive age group epithelial ovarian cancer constituted 80,35%, with most cases in 35-39 years old. I-II stage EOC were registered in 35,4% patients. 91,6% of childhood female cancer survivors in Ukraine underwent ovarian cancer treatment.

Conclusion: In Ukraine's neighbours ovarian cancer in women younger than 40 years varies from 5,67% to 17,78% (61-1347 new cases per year); In Ukraine patients younger 40 y.o. with epithelial ovarian cancer account 6.47% of the newly diagnosed ovarian cancer; In Ukraine 91,6% of female childhood cancer survivors underwent ovarian cancer treatment.

Keywords: Epithelial Ovarian Cancer; Reproductive Age; Childhood Survivors; Epidemiology

Introduction

Nowadays, in oncology and oncogynecology in particular, a new direction has been developing rapidly, which is the fertility of oncogynecological patients. This is due to several factors, such as increasing incidence of cancer in reproductive age; the advanced age of first maternity; demand for approaches with fertility preservation and the fact that approximately 1 in 530 young adults between the ages of 20 and 39 years is a childhood cancer survivor [1]. Modern fertility-sparing options have been successfully attempted in selected cases of cervical, endometrial cancer; but for epithelial ovarian cancer (EOC) it is the least studied approach due to the bias that this pathology is more common in elder women

[2]. The aim of this work was to analyze the incidence of EOC in reproductive age women in Ukraine and Ukraine's neighbour countries.

Materials and methods

The methods of statistical analysis in descriptive oncoepidemiology were used to process the data. Two sources were used for cancer incidence data reported in this article: National Cancer Registry of Ukraine and GLOBOCAN data. Based on the principles and methodology of medical informatics, the quality control of primary information was conducted in the database of the

National Cancer Registry of Ukraine and the samples were formed. In 2018 a cohort of 3539 patients with ovarian cancer (C56) was formed and reproductive age group (15-39 year) constituted 285 women. A childhood ovarian cancer survivors group included 314 adolescent. The numbers of ovarian cancer cases in Ukraine's neighbour countries in 2018 was adopted from GLOBOCAN [3]. The data processing was carried out using the programs of National Cancer Registry of Ukraine information system.

Results and Discussions

A considerable variation of the incidence of ovarian cancer (OC) is observed around the world. According to National Cancer Registry of Ukraine, the age-standardized incidence rate in Ukraine is 11,3 per 100 000, which ranks 6th in Europe [3]. In Ukraine's neighbour countries the highest ovarian cancer incidence occurs in Belarus (15,4 per 100 000), Poland (14,7 per 100 000) and Hungary (13,2 per 100 000) (Table 1). In the structure of 10 leading cancers in Ukrainian women, OC was ranking 5th for the last 3 years. In 2018 in Ukraine 3539 new cases of ovarian cancer were registered. Since fertility-sparing treatment is considered only in OC patients younger than 40 years old, women aged 15-39 years were selected. Reproductive age group included 285 Ukrainian women (8,05%). In Ukraine's neighbours the highest rates of reproductive age patients were registered in Moldova (17,78%), Belarus (10,99%) and Russian Federation (9,67%). Taking into account the fact that clinical prognosis in patients with epithelial ovarian cancer (EOC) is the worst, we analyzed these cases. In the reproductive age group, EOC constituted 80,35% (229 women), with most cases in 35-39 years old women. As less than 40% of cases are diagnosed in early-stage disease, ovarian cancer has the highest death-to-case ratio of all gynecologic cancers [4]. However, the analysis of the proportion between the early stages in epithelial and non-epithelial ovarian cancer was not conducted, especially in reproductive age group. In our study - I-II stage EOC were registered in 35,4% patients, 24,9% in Ist stage and 10,5% for IInd stage. In the, we presented the results of age distribution by stages among patients with non-epithelial ovarian cancer for comparison. As can be seen from the figure, 55.4% of non-EOC diagnosed in early stages: 45,3% in Ist stage and 10,1% in IInd stage of disease. Today the fertility-sparing treatment has the greatest limitations in EOC. The latest (2019) ESMO-ESGO Consensus does not recommend ultra-conservative surgical treatment in EOC. According to the recommendation 7.2: there is no place for ovarian preservation for invasive EOC greater than fully staged FIGO stage I. Level of evidence: V, Strength of recommendation: A [5]. At the same time, there are few case reports about FST of stage II of invasive EOC [6,7]. In this regard, only a further detailed analysis of the results of fertility-sparing treatment of patients with stage II EOC will confirm or not the possibility and oncological safety of this approach. Female childhood cancer survivors are a difficult observation group for

pediatricians, oncogynecologists and gynecologists. According to the updated data of the National Cancer Register of Ukraine in 2018, there are 314 such patients after treatment of ovarian cancer. As can be seen in the, these children constitute 91,6% of female childhood cancer survivors. This information presents great clinical value because the fertility rate of fertility-preserving attempts has succeeded in patients with adolescent ovarian cancer [8]. The need for radical surgery after childbirth remains to be under debate. Some authors [9] suggested that radical surgery should be considered after childbearing, while other decided that in selected patients, after an appropriate counseling, it is possible to delay the surgery with a close follow-up, due to the importance of endocrine function preservation [2]. At any rate, it should be considered that EOC is an aggressive chronic disease with a high (9% - 29%,) rate of recurrences after conservative treatment [2] and even after successful pregnancies, such childhood ovarian cancer survivors should be meticulously followed up.

Conclusion

The development of fertility-sparing approaches is important in ovarian cancer as

in Ukraine's neighbors ovarian cancer proportion of women younger than 40 years varies from 5,67% to 17,78% (61-1347 new cases per year); in Ukraine patients younger than 40 y.o. with epithelial ovarian cancer comprises 6.47% of the newly diagnosed ovarian cancer; in Ukraine 91,6% childhood cancer survivors underwent ovarian cancer treatment. Comprehensive surgical staging (according to the last ESGO-ESMO consensus,5) would enable to choose patients with epithelial ovarian cancer for safe fertility-sparing treatment. On the other hand, understanding of the epidemiological situation will allow quality medical care for this group of patients.

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