Ovarian Cancer Treatment at the Yaoundé Gyneco– Obstetric and Pediatric Hospital: a study of 27 patients.

Serge Robert Nyada[1], Philemon Nsem Arrey[1], Esther Meka[1,2], Julius Dohbit Sama[1,2], Pascal Foumane[1,2].

[1]Department of Obstetrics and Gynecology, Faculty of Medicine and Biomedical Sciences, University of Yaoundé 1, Yaoundé - Cameroon

[2]Obstetrics and Gynecology unit, Yaoundé Gyneco – Obstetric and Pediatric Hospital, Yaoundé - Cameroon

Corresponding author: **Serge Robert Nyada**

Abstract: *Ovarian cancer is one of the most lethal cancers of women, especially in developing countries like Cameroon. The diagnosis is often late. We carried out a cohort study of patients having an ovarian cancer managed at the Yaoundé Gyneco – Obstetric and Pediatric Hospital between January 1st 2004 and December 31st 2014. The aim of this study was to determine the survival rate of patients after ovarian cancer treatment. We recruited 27 patients. The mean age was 47.48 years. Average parity was 3.44 children. On admission, abdominal bloating was found in 81.5% of patients and abdominal pain in 59.2% of patients. Average duration of disease was 4.9 months. Stage III and IV disease was found in 25.9% and 33.4% of patients. Serous epithelial carcinoma was the most frequent histological type accounting for 66.7%. Radiological findings highlighted the presence of ovarian masses in 85% and ascites in 50% of cases. Most of patients underwent surgery combined with chemotherapy (66.7%) and 25.9% had chemotherapy alone. The overall survival rate at 2 years was 34%. Efforts should be made on early detection of ovarian cancer in order to reduce mortality.*

Keywords: *ovarian cancer, treatment, survival rate, Cameroon*

INTRODUCTION

Ovarian cancer is the fifth most common type of cancer in females and the leading cause of mortality for gynecological malignancies [1]. Epithelial ovarian cancer is the most frequent variety. In 2013, there were an estimated 22,240 new cases of ovarian cancer and 14,030 deaths in the United States [2]. Ovarian cancer is rarely diagnosed during the early stages due to lack of effective screening test and the fact that symptoms are unspecific in most cases [3].

In Cameroon, clinical and pathological pattern of ovarian cancer have already been studied [4,5]. However, little is known about the outcome of ovarian cancer in our setting. In this study, we aimed to assess the overall survival rate of ovarian cancer in a teaching hospital in Yaoundé.

MATERIALS AND METHODS

A cohort analysis of patients having an ovarian cancer managed at the Yaoundé Gyneco – Obstetric and Pediatric Hospital was carried out from January 1st 2004 to December 31st 2014.

We recruited patients having a diagnosis and a treatment for ovarian cancer. Demographic characteristics, clinical, pathological and radiological presentations were described. Treatment and outcome of the patients were analyzed by studying follow-up stated in the medical records of patients. For dead patients, the time of death was precisely stated.

Variables of the study were: risk factors of ovarian cancer, clinical diagnosis approach, radiological and pathological presentation evolution of the disease, treatment and overall survival. We use the Kaplan-Meier procedure to estimate the survival rate.

RESULTS

Population characteristics

We identified 35 patients during the 10 years period. Among them, 27 patients met the inclusion criteria.

The mean age was 47.48 ±14.57 years. Most frequent age groups were [40 –49[years and [50 –59[years representing each 29.6%. Patients below 30 years and those between 30 to 39 years represented both 11.1%. In addition, patients beyond 60 years accounted for 18.6%.

The average parity was 3.44. Six patients (22.2%) were nulliparous. Thirteen patients (49%) were pre-menopausal.

Seven patients had previously used oral contraceptive pills. The average duration was 10.6 months. None of the patients has had a hormone replacement therapy.

We had two cases with family history of breast cancer in their family history and four patients had a history of ovarian cancer during the previous four years.

According to their HIV status, sixteen patients (59.25%) were not investigated. The screening test was negative for ten patients, and there was a known HIV

positive patient already on anti-retroviral drugs for more than ten years.

The clinical presentation

One patient was asymptomatic at admission. Others were symptomatic and the most frequent symptoms were abdominal bloating in 81.5% and abdominal pain in 59.2%(Figure 1).
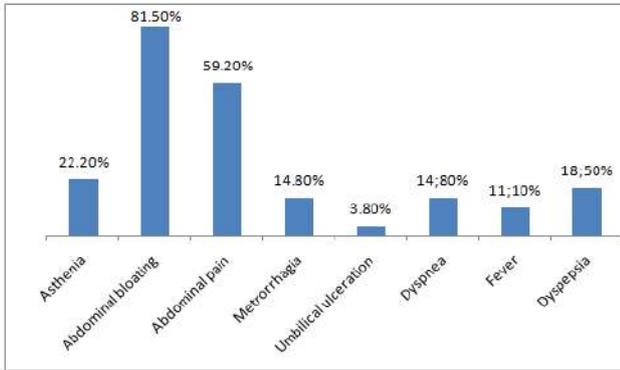

Figure 1: *Symptoms at admission (n=27)*

The average duration of symptoms was 4.9 months with extremes between 1 and 36 months. Twenty patients (74.1%) had symptoms for less than 6 months.

On physical examination, ascites, abdominal mass, abdominal tenderness and umbilical ulceration were found respectively in 66.6%; 51.8%; 11.1% and 3.8% of patients.

A stage I, II, III, IV disease was found respectively in 25.9%; 14.8%; 25.9% and 33.4% of patients.

According to the histological type, serous epithelial carcinoma was found in 66.7% of our patients (Figure 2).
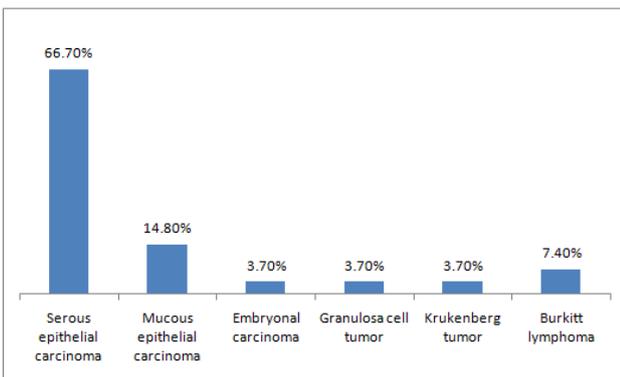

Figure 2: *Histological type (n=27)*

Radiological workup (ultrasounds and/or CT scan) was done for 20 patients and the relevant findings were ovarian masses in 85%, ascites in 50% and metastasis in 15%.

Eleven patients had their biomarkers done and available. CA 125 marker was elevated in eight cases and normal in two cases. Other biomarkers such as CA 15-3, ACE, alpha-foeto protein and LDH were normal for two patients out of two.

The treatment and outcome

Combined surgery and chemotherapy was done for 66.7% of our patients. 25.9 % of our patients had exclusively chemotherapy. 3.7% had exclusively surgery and 3.7% had combined surgery, chemotherapy and radiotherapy.

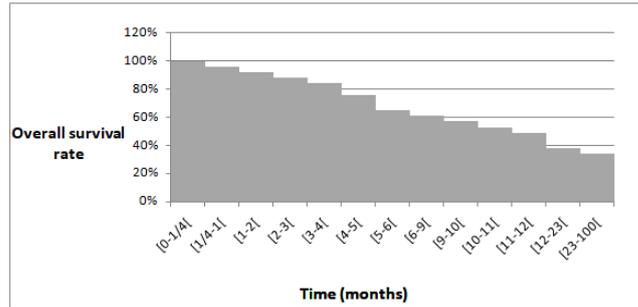According to Kaplan–Meier analysis, overall survival rate at 2 years was 34% (Figure 3).

Figure 3: *Kaplan-Meier analysis of survival (n=27)*

DISCUSSION

Worldwide, prognosis of ovarian cancer is worse. In our study, the overall survival rate of ovarian cancer at two years was 34%. In Australia, Anuradha [6] found out an overall crude 5-year survival rate of 35%. In Senegal [7], Dem studying epithelial ovarian cancer had a survival rate at five years of 13.3%.

Increasing age and disease stage of patients are associated with poor survival. In our study, 77% of our patients still alive at two years were below 50 years and 66% were having a stage I disease. Arikan [8] found among significant factors for 5-years survival, age and FIGO, clinical stage. Dem [7] found no difference in patients less than 40 years old. Adekanbi [9] in Nigeria reported that a younger age was associated with improved survival. Anuradha [6] stated that increased age, increased disease stage and the presence of ascites are associated with poorer survival.

Socioeconomic disadvantage and remote residence from hospital were stated as poor survival determinants [6, 10]. These particular aspects were not analyzed in our study.

According to the histological analysis, Adekanbi [9] noted that the longest living patient had the lowest mitotic activity, a predominantly glandular architecture and little or no nuclear pleomorphism. Anuradha [6] reported that carcinosarcomas, clear cell and mucinous cancers are associated with worse survival, compared to serous cancers. Arikan [8] found that lymph node metastases, histological type and malignant cytology were significant factors for 5 years survival. In our study, 55% of our patients still alive had serous cancers.

CA 125 values and BRCA1 or BRCA2 mutations are important in predicting survival. Preoperative values of CA 125, the absence of residual tumor and lymph node metastases were significant factors for 5-years survival [8]. In our study, among the 10 patients having done CA 125 test, the two normal results were recorded for patients still alive. Residual tumor, lymph node metastases and BRCA mutation were not recorded in our study.

CONCLUSION

The prognosis of ovarian cancer in our milieu, as well as all over the world is poor. Most of our patients consulted at late stages of the disease. As recommendation, we emphasize on early detection and treatment of ovarian cancer.

Authors' contributions

Serge Robert Nyada carried out the study, Pascal Foumane supervised the study, Philemon Nsem Arrey, Julius Dohbit Sama and Esther Meka read the manuscript. All the authors approved the final version of the manuscript.

REFERENCES

[1] Tomao F, Papa A, Strudel M, Rossi L, Lo Russo G, Benedetti Panici P et al. Investigating molecular profiles of ovarian cancer: an update on cancer stem cells. J Cancer 2014; 5(5):301-310.

[2] Yoon JY, Koo YJ, Kim MJ, Kim TJ, Lim KT, Lee KH. Survival outcomes and toxicity of intraoperative intraperitoneal chemotherapy in advanced epithelial ovarian cancer. ObstetGynecol Sci. 2014; 57(6):484-491.

[3] Ramirez I, Chon HS, Apte SM. The role of surgery in the management of epithelial ovarian cancer. Cancer Control. 2011;18(1):22-30.

[4] Sando Z, Mboudou E, Fouogue TJ, Nganwa G, Tchuendem J, Essame JL. Profil Clinique et anatomopathologique des cancers de l'ovaire à Yaoundé, Cameroun. Clin Mother Child Health. 2010 ;7(1) :1183-1188.

[5] Doh AS, Shasha W. A clinico-pathological study of ovarian tumors in Yaounde-Cameroon. West Afr J Med. 1994; 13(4): 196-199.

[6] Anuradha S, Webb PM, Blomfield P, Brand AH, Friedlander M, Leung Y et al. Survival of Australian women with invasive epithelial ovarian cancer: a population-based study. Med J Aust. 2014; 201(5):283-288.

[7] Dem A, Dieng MM, Ka S, Gaye PM, Diouf D, Gaye-Fall MC. Diagnosis and treatment of the epithelial ovarian cancer at the West African Cancer of Dakar. Bull Cancer. 2013; 100(2): 155-160.

[8] Arikan SK, Kasap B, Yetimalar H, Yildiz A, Sakarya DK, Tatar S. Impact of prognostic factors on survival rates in patients with ovarian carcinoma. Asian Pac J Cancer Prev. 2014; 15(15): 6087-6094.

[9] Adekanbi AA, Olayemi O, Okolo CA, Fawole AO, Odukogbe AT, Okani CO. Survival of ovarian cancer patients in Ibadan: clinical and pathological factors. J Obst Gynaecol. 2014; 34(1):57-59.

[10] Tracey E, Hacker N, Young J, Armstrong B. Effects of access to and treatment in specialist facilities on survival from epithelial ovarian cancer in Australian women: a data linkage study. Int J Gynecol Cancer. 2014; 24(7):1232-1240.