

# ANEMIA CAUSED BY BLEEDING FROM ADVANCED BREAST CANCER

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## Summary

**Introduction.** According to the National Cancer Registry in Poland, breast cancer is the most common cancer among women in Poland. In the recent years, the number of new cases reached more than 16,000 cases per year. Breast cancer in Poland is the second cause of deaths from neoplastic disease among women (after lung cancer).

Anemia is defined as a hemoglobin level below the low end of the normal range, which is 12 g/dl for women and 14 g/dl in men. The etiopathogenesis of anemia is multifactorial. Bleeding occurs in approximately 6 to 10% of patients with an advanced cancer. Massive blood loss may cause immediate death, therefore, it is important to identify patients who are at risk and use preventive tools before a crisis occurs.

**Aim.** The aim of this study was to analyze the symptoms in women with advanced breast carcinoma who additionally suffer from anemia and to determine the most successful methods of treatment.

**Material and methods.** This study involved a group of 10 women with advanced breast carcinoma hospitalized in the Department of Surgical Oncology of the Hospital Ministry of Internal Affairs with Warmia and Mazury Oncology Centre in Olsztyn in the years 2012-2015. During the diagnostics process, the following tests were performed: chest X-ray, mammography, ultrasonography (US) of the abdomen and pelvis, US of the axillar lymph nodes. All of the patients had stage IV breast cancer (including cT4) and had third or fourth degree of anemia according to the WHO (World Health Organization) and NCI (National Cancer Institute) classification (hemoglobin level lower than 7.9 g/dl).

**Results.** After analyzing the cases, the following symptoms were found in all of the patients: exhaustion, weakness, fatigue, pain, depression, decreased exercise tolerance, headaches and dizziness. The age of the patients ranged from 52 to 68 years of age.

**Conclusions.** Patients with advanced breast carcinoma complicated with bleeding should be treated in high-specialized oncological centers, where different therapies can be performed immediately.

Keywords: carcinoma, bleeding, surgery, treatment

## INTRODUCTION

According to the National Cancer Registry in Poland, breast cancer is the most common cancer among women in Poland. In the recent years, the number of new cases reached more than 16,000 cases per year. Breast cancer in Poland, after lung cancer, is the second cause of deaths from neoplastic disease among women. Every year, 5,500 deaths are caused by this neoplasm.

Despite now easily available screening tests, including mammography, our Department of Surgical Oncology still regularly admits patients with advanced breast cancer, which can present with anemia.

## AIM

The aim of this study was to analyze the symptoms in women with advanced breast carcinoma who additionally suffer from anemia and to determine the most successful methods of treatment.

## MATERIAL AND METHODS

This study involved a group of 10 women with advanced breast carcinoma hospitalized in the Department of Surgical Oncology of the Hospital Ministry of Internal Affairs with Warmia and Mazury Oncology Centre in Olsztyn in the years 2012-2015. During the diagnostics process, the following tests were performed: chest X-ray, mammography, ultrasonography (US) of the abdomen and pelvis, US of the axillar lymph nodes. All of the patients had stage IV breast cancer (including cT4) and had third or fourth degree of anemia according to the WHO (World Health Organization) and NCI (National Cancer Institute) (hemoglobin level lower than 7.9 g/dl).

## RESULTS

After analyzing the cases, the following symptoms were found in all of the patients: exhaustion, weakness, fatigue, pain, depression, decreased exercise tolerance,

headaches and dizziness. The age of the patients ranged from 52 to 68 years of age.

## DISCUSSION

Anemia is defined as a hemoglobin level below the low end of the normal range, which is 12 g/dl for women and 14 g/dl for men (1). The etiopathogenesis of anemia is multifactorial (1, 2). Bleeding occurs in approximately between 6 to 10% of patients with advanced cancer (1, 2). Massive blood loss may cause immediate death, therefore, it is important to identify patients who are at risk and use preventive tools before a crisis occurs (1-3).

General symptoms of anemia in patients with advanced cancer include: weakness, fatigue, anxiety, depression, headaches, dizziness, shortness of breath, fatigue, irritability and lack of motivation. The physical examination reveals tachycardia, pallor and decreased body temperature. The severity of anemia is classified according to the hemoglobin level.

The treatment of patients with advanced carcinoma and bleeding should be individualized depending on patient's general condition. In this article, the authors described a group of patients in whom the bleeding was caused by the local infiltration of blood vessels by tumor, with surgery as the only effective treatment option.

The management of the patients with advanced carcinomas additionally suffering from bleedings consists of local and systemic interventions (2, 4, 5). Local measures include: non-adherent wound dressings, hemostatic dressings (in the form of microfibrillar collagen, absorbable collagen sheets and absorbable collagen sponges), hemostatic agents (such as acetone, silver nitrate, formalin), radiotherapy, surgery (blood vessel ligation and tissue resection), endoscopic interventions and interventional radiology (transcutaneous arterial embolization, transcutaneous arterial balloons) (2, 5-7). Systemic interventions include: pharmacotherapy with intravenous vitamin K, vasopressin or

desmopressin, somatostatin analogues, antifibrinolytic agents (tranexamic acid, aprotinin) and transfusion of blood products (platelets, fresh frozen plasma, coagulation factors) (2, 3, 8-10).

Our patients were all treated surgically due to the advanced breast carcinoma. Palliative surgery allowed to stop the bleeding by removing the tissue. The patients were referred for further systemic treatment. The treatment proved effective in all our patients, who left our Department in good general condition.

## CONCLUSIONS

Patients with advanced breast carcinoma complicated with bleeding should be treated in high-specialized oncological centers, where different therapies can be performed immediately.

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## Conflict of interest

None

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