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Editorial

Inflammatory Breast Cancer in North Africa: More Work Required

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Editorial

Breast cancer is the most common cancer in women worldwide. It is also the principle cause of death from cancer among women globally with a half million deaths each year [1]. While, the number of breast cancer cases is more frequent in western countries than in Africa, its incidence in North Africa (NA) was continuously increasing to reach 42 new cases per 100,000 women in Egypt in 2009 for example [2]. This number is projected to nearly double by 2030 simply due to the aging of the North African population, the adoption of lifestyles associated with economic development, such as unhealthy diet and smoking [3].

During the last decades, breast cancer survival has been improved significantly. This was attributed to the advancement in screening assays, surgery, mammography, radiation and hormonal therapy and public awareness. Despite this impressive progress that has been made in breast cancer at epidemiological, genetic and molecular levels, allowing those at high risk to be easily identified; Inflammatory Breast Cancer (IBC), a rare and the most aggressive form of breast cancer, remains difficult to diagnose at early stage. The present article gives an overview of IBC especially in NA where more work and help from the local and international communities are required in order to save lives from this deadly and poor understood disease.

IBC is a form of locally advanced breast cancer that was first described by Lee and Tannenbaum in 1924 [4]. The disease begins in the breast duct tissue and spreading quickly to lymphatic vessels in the skin and surrounding tissue. IBC is called "inflammatory" because the breast often looks swollen and red or inflamed. It is often not diagnosed until it reaches a late stage because it can progress rapidly, in a matter of few weeks or months and as such has the potential to impact long-term survival outcomes. Typical IBC shows low levels of estrogen and progesterone receptors. The most comment drug such as Tamoxifen that interfere with the growth of tumor cells by estrogen is not effective against this type of cancer.

While the incidence of IBC in western countries is very low (1-2% of all breast cancers) and the average age of onset of the disease is ~55 years [5], in other parts of the world, such as NA, the picture is much worse. Indeed, 10% of all breast cancer cases are inflammatory and patients are diagnosed at young age (<45) [6-8] causing a serious public health problem. Indeed, because of the lack of awareness campaigns about the magnitude of the current and future cancer burden among the general public, private or public health agencies, the high cost of the diagnostic tests and the limited financial support and socioeconomic situation, the majority of IBC patients in NA come to hospitals at advanced stage of this form of cancer [9,10]. The high incidence of IBC in NA remains to be elucidated, only few studies with relatively low patient numbers have been performed locally so fare [11-15].

The assessments of the diagnosis of IBC in NA have relied mainly on retrospectively reviewed information provided in medical records [8]. The analysis of a larger population is required in order to explain the high incidence of IBC in NA and to identify specific markers that may be targeted for its treatment. The existence of these studies has relatively improved the level of detection and primary treatment of IBC in North African countries by partnering international scientists with local researcher and clinics for a more systematic response to the disease. For example, a recent Tunisian study showed that local IBC patients are characterized by basal and HER2 phenotypes and the luminal IBC also express the basal marker P-cadherin [16]. In another study, RhoC was highly expressed in Tunisian and Egyptian IBC patients [12]. These specificities need to be explored further and if confirmed a prompt treatment can be targeted. The local North African teams are starting new programs to educate the community and raise awareness of the importance of early detection of cancers. For example in Morocco, the Lalla Salma Foundation Against Cancer has launched a few years ago a periodical annual campaign for early breast cancer detection and eventually gives financial support for clinical and scientific studies aiming to contribute in establishing a national epidemiological database and in deciphering molecular and genetic pattern cancers including IBC throughout all Morocco. Also and in order to address the growing cancer burden in Africa, the African Organization for Research and Training In Cancer (AORTIC) has been created and is committed to fostering research, education, and advocacy on a variety of levels to increase awareness of cancer especially IBC, the most aggressive form of breast cancer.

Conclusion

The results of the literature showed that the incidence of IBC in NA was greater than the incidence in western countries. In addition, IBC was associated with high grade and younger age in NA. The high grade of the disease can be explained by the late diagnosis and the aggressiveness and quick metastasis of IBC. However, some questions remain without answers such as why young North African women are more susceptible to IBC, why the incidence is high and are there reproductive and environmental factors or viruses that may favor this type of cancer or play a role in its faster progression in NA. To find answers to these questions, large clinical studies, awareness of the local populations, more social and financial efforts are still needed.

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