

Promoting Clinical Breast Examination as A screening Tool for Breast Cancer in Iraq

ترويج الفحص السريري للثدي كأداة للكشف المبكر عن سرطان الثدي في العراق

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المستخلص:

يشكل سرطان الثدي حوالي ربع حالات السرطانات المسجلة بين السكان العراقيين حيث يعتبر السبب الرئيسي للوفاة بين النساء العراقيات. وقد ثقت منظمة الصحة العالمية أن الكشف المبكر عن السرطان اذا ما رافقه العلاج المناسب، يمكن أن يوفر تخفيضاً في معدلات الوفيات من سرطان الثدي؛ مبينة ان سبب انخفاض معدلات البقاء على في البلدان الأقل نمواً، بما في ذلك العراق، يعزى أساساً إلى عدم وجود برامج التحري و للكشف المبكر عن السرطان إلى جانب عدم كفاية المرافق اللازمة للتشخيص والعلاج.

وعلى الرغم من أن آلات التصوير الشعاعي للثدي و طرق الكشف المبكر عن السرطان تعتبر متوفرة حالياً في المستشفيات الرئيسية في كل محافظة في العراق، إلا أنها تستخدم أساساً لأغراض التشخيص للمرضى الذين يعانون من أورام في الثدي. و بسبب التكلفة والتحديات الاقتصادية التي تواجه العراق في الوضع الراهن فليس من المتوقع أن النظام الصحي يمكن أن يوفر أجهزة التصوير الشعاعي للثدي في كل مراكز الرعاية الصحية في البلاد لاستخدامها في فحص جميع النساء العراقيات. و لذلك فإن تعزيز توفر أدوات مجدية أخرى للكشف المبكر عن السرطان يمكن أن يساعد في حل تلك المعضلة السريرية.

أن ترويج عملية الفحص السريري للثدي من قبل كادر صحي متدرب في مراكز الرعاية الصحية الأولية، مع توفير التصوير الشعاعي للثدي لتشخيص الحالات المحالة في المستشفيات الرئيسية يمكن أن تعتمد كمنهج فعالة من حيث التكلفة للتحري و الكشف المبكر عن سرطان الثدي في العراق. حيث ان الموارد اللازمة لتوفير هذه الخدمات هي في متناول جميع البلدان ذات الموارد المحدودة.

تحتاج مسألة التوعية عن سرطان الثدي والكشف المبكر عنه التدابير اللازمة لمعالجتها. إذ تعكس بوضوح البحوث و الدراسات العراقية المتوفرة أن المعرفة محدودة بصورة عامة بين السكان حول المرض والتدابير الوقائية اللازمة كما ان مستوى التوعية يعتبر متدنياً بشأن أهمية الفحص السريري للثدي و الاستشارات الطبية المبكرة. لذا يتوجب على صانعي القرار و السياسات في البلاد تأييد حملات التوعية الصحية الجماهيرية لتشجيع جميع النساء العراقيات للتحري المبكر عن العلامات والأعراض غير الطبيعية التي تطرأ في الثدي و اللجوء فوراً إلى المشورة الطبية.

Abstract:

Breast cancer constitutes about one fourth of the registered cancer cases among the Iraqi population ⁽¹⁾ and it is the leading cause of death among Iraqi women ⁽²⁾. Each year more women are exposed to the vicious ramifications of this disease which include death if left unmanaged or the negative sequels that they would experience, cosmetically and psychologically, after exposure to radical mastectomy.

The World Health Organization (WHO) documented that early detection and screening, when coped with adequate therapy, could offer a reduction in breast cancer mortality; displaying that the low survival rates in less developed countries, including Iraq, is mainly attributed to the lack of early detection programs coupled with inadequate diagnostic and treatment facilities ⁽³⁾. Although mammography machines, as main screening tools for breast cancer, are available in the major hospitals in each province in Iraq, yet those are mainly used for diagnostic purposes in patients who present with palpable breast lumps. Obviously, due to cost effective measures, lack of resources and the economical challenges that Iraq is facing, it is not expected that the authorities could provide mammography devices across every health care centre in the country to be used for screening of all Iraqi women.

Accordingly, promoting other feasible tools could support in solving that dilemma. Clinical Breast Examination (CBE) for women, by highly trained health care providers in Primary Health Care Centers, along with diagnostic mammography in the major hospitals for referred cases, could offer cost effective approaches for early detection of breast cancer in Iraq. The resources required to provide these services are within the reach of all countries with limited resources ⁽⁴⁾.

The issue of raising awareness on breast cancer and its early detection measures needs to be addressed. Observations reported in Iraqi studies obviously reflect the the limited knowledge of the general population about the disease, its preventive measures and their ignorance regarding the significance of CBE and early medical consultation ^(5, 6). Public health awareness campaigns should be endorsed by policy makers to

encourage every Iraqi women to look for abnormal signs and symptoms in their breasts and to seek medical advice promptly.

Keywords : Breast Cancer, Clinical Breast Examination (CBE), Early Detection, Screening, Iraq.

Introduction:

Global Burden of Breast Cancer:

Globally, breast cancer is the most frequent cancer among women; comprising about 23 % of all female cancers ⁽²⁾. Overall, the average incidence for this disease in developed countries is usually more than 80 per 100.000 while it is less than 40 per 100.000 in the developing world ⁽⁷⁾. Nevertheless, it is also the leading cause of cancer-related deaths; case fatality rates are highest in low resource countries ^(2, 4).

Breast cancer survival rates vary greatly worldwide, ranging from over 80% in North America, Sweden and Japan to around 60% in middle-income countries and below 40% in low-income regions of the world ^(2, 8). The low survival rates in less developed countries are mainly attributed to the lack of awareness programs, resulting in a high proportion of women presenting in late-stages, in addition to the limited capacity for early diagnosis and effective multimodality treatment ⁽⁹⁾. It has been reported that the largest increase in cancer deaths among the WHO regions in the coming 15 years is likely to be in the Eastern Mediterranean Region (EMR); where breast cancer is reported as the most prevalent type of female malignancy in almost all national cancer registries ^(2, 3).

Breast Cancer among Iraqi Individuals:

Breast cancer is the most common type of malignancy among the Iraqi population in general; responsible for about one third of the registered female cancers and almost one quarter of female deaths from the disease ^(1, 2). Within the last two decades, there has been an obvious increase in the incidence rates of breast cancer, which became one of the major threats to Iraqi female health. It has a tendency to affect middle aged women in whom it is often diagnosed in advanced stages with a likely

prevalence of aggressive behavior yielding high mortality incidence ratio ^(1, 10, and 11).

In 2010, it has been reported that out of 721 women, who presented with palpable breast masses in a screening center for early detection of breast cancer in Iraq, 143 were diagnosed with breast cancer (19.8%). Although 90.6% of those patients detected the lumps initially by themselves, only 32% sought medical advice within the first month while 16. % visited the doctor one year later ⁽¹⁰⁾. Another survey conducted in 2012, to explore the knowledge, attitude and practice towards breast cancer among a sample of educated women, revealed that approximately half of the participants had low knowledge score (under 50%). The study demonstrated that 90 % of the respondents had heard about Breast Self-Examination (BSE), however, only 43% did actually practice the technique ⁽⁵⁾. In a similar study carried out in the North of Iraq, multiple logistic regressions displayed that age of the participants, knowledge on the means of early detection and factors that could decrease the incidence of the disease were significantly associated with practicing BSE ⁽⁶⁾.

The outcomes of those studies obviously illustrate significant knowledge gaps about the relative importance of breast cancer in the community and suggest a potential to take practical policy decisions that aim at increasing early detection through elevating the level of awareness among Iraqi women ⁽¹²⁾. Emphasis should be directed to display the crucial benefits of addressing the risk factors of breast cancer and its hazards when neglected. Public education campaigns should be initiated to convince women that if they abide to the early detection protocols, many breast lesions could be diagnosed at their earliest stages; thus increasing the chance of cure from the disease.

Significance of CBE in the Early Diagnosis of Breast Lesions:

Clinical Breast Examination is a simple early detection measure for breast cancer, performed by a trained health care provider that could be a physician or a nurse. It aims to detect breast abnormalities in their earliest stage of presentation. The efficacy of CBE is dependent upon a number of factors that include proper positioning of the patient, thoroughness of the search, accurate movement of the fingers and examination duration of at least 5 minutes per breast⁽¹³⁾.

The Breast Health Global Initiative Summit Guidelines for breast health care recommended CBE as a screening measure of choice to be employed for early detection of breast cancer in countries with limited resources⁽⁴⁾. In Mumbai, a conducted trial using an adjustment model demonstrated an increase in cost effectiveness ratio in the detection of breast cancer using biennial CBE in patients aged 40 – 60 years old, with corresponding mortality reduction⁽¹⁴⁾.

In another study, the University of Texas evaluated the cost effectiveness of combining CBE and mammography. The investigators demonstrated that examination by both every two years, for the age group between 40-79 years, resulted in cost effectiveness gain of 35000 US \$ for every one QALY gained. Applying triennial CBE along with annual mammography for the same age group, yielded a cost effectiveness of 3,939,000 US \$ per one QALY gained⁽¹⁵⁾.

Procedure of CBE:

The patient should be examined in both the upright and supine positions. She must be disrobed from the waist up allowing the examiner to visualize the breasts looking for changes in the contour or colour of the breasts and nipples, dimpling or puckering of the skin, abnormal vascularity, or any abnormal signs. Inspection should be performed while the patient assumes three standing positions: arm relaxed at the sides, hands pressed firmly on the waist (to contract the pectoral muscles) and

arms over the head allowing the lower part of the breast to be inspected.

That should be followed by palpation using the pads of the three middle fingers. The examination should cover the whole area of each breast including the axillary region and the upper chest; moving from the collar bone to below the breasts and from the armpits to the breastbone. The search patterns could be either vertical, concentric or radial. It is helpful to record the location of any abnormality by documenting the position on the breast and the distance in centimeters from the areola⁽¹³⁾.

Promoting CBE as a Screening Tool for Breast Cancer in Iraq:

CBE might be of particular importance in countries where breast cancer is often diagnosed at advanced stages at the time of presentation and where there are insufficient resources to apply mammography screening^(3, 4, and 16). These observations yield a motive to acknowledge the possible benefit of applying CBE to the Iraqi scenario.

In Iraq, as a low middle income country, the resources for establishing a fully equipped nationwide early detection system for the target population at risk are limited, at least in terms of the availability of adequate detection devices, i.e., mammography machines and ultrasounds. Other obstacles include the inadequate number of well trained radiologists and radiographers and the insufficient standardized quality control procedures.

Therefore, it is logical to search for other screening measures that are both efficient and cost effective. In the current circumstances, CBE is recommended as a convenient feasible approach for detecting breast lumps specifically in premenopausal women; where the peak frequency of breast cancer is demonstrated (1, 10) and where the mammograms are less sensitive and do not prove to be completely efficient⁽¹⁷⁾.

Family physicians and those working in primary health care centers in Iraq should be

instructed to perform CBE for women starting from the age of 20 years, as a part of her routine check-up every 2-3 years, increasing to once a year from the age of 30 years and above. Once an abnormality is detected, the patient should be referred for mammography and other relevant diagnostic investigations

Integrating CBE with Mammography:

Obviously, when integrating these two measures in concert, the accuracy of diagnosing breast cancer would be raised. Earlier surveys demonstrated that the sensitivity and effectiveness of the two diagnostic approaches when combined together was higher than when each was conducted separately, specifically in young women under 40 years ^(18,19). The American cancer society (ACS) recommends women after the age of 40 years to have both CBE and mammography every year; CBE to be conducted before mammography, to attract the attention of the examining radiologist to any abnormal finding detected by CBE ⁽¹³⁾.

Training the Health Care Providers on CBE:

Training health care providers on the procedure of CBE, is a process that has systematic organizations and protocols ⁽²⁰⁾. CBE programs and workshops aim to educate a variety of physicians and nurses on how to acquire the knowledge and skills to perform the examination ⁽²¹⁾. The Iraqi National Breast Cancer Research Program adopted certain measures to promote CBE awareness among the population ⁽²²⁾.

During the training educational programs, the trainees are provided with visual and practical presentations, where video and live examinations are demonstrated with thorough explanations to each stage of examination. During the practical sessions, the trainees are allowed to practice CBE on silicone breast model, as simulations of real life cases, and later on patients presenting with palpable breast lumps. The trainers should ensure that the trainees have full orientation and feedback on their progress in each step of the examination.

Incentives offered by the continuous medical educational units could help to improve the outcomes of these programs; through providing encouraging certificates after completing the CBE programs and establishing continuous contacts with the trainees to keep them updated with any future activities and research innovations.

The trainees and health care providers should be instructed that a successful CBE training program have three essential components: first, reporting comprehensive history and thorough clinical examination, second, commitment to follow the standardized procedure of CBE and third, interpretation of the findings of CBE through comparing its results with those obtained by using other diagnostic modalities, i.e., imaging techniques and pathology.

Program leaders must take into account the different settings of the population that a CBE practitioner would have to deal with. The difference in professions and educational backgrounds among the trainees should be also considered ⁽²³⁾. When instructing a health care provider from rural areas on the procedure, the trainers should be oriented to the proper behavioral skills of communication prevalent in those areas. Adjusting the training programs in correspondence with the environment and experience of the trainees help significantly in implementing more accurate skills.

Following the same rationale, rather similar maneuvers are currently practiced in neighboring countries in the Eastern Mediterranean Region ^(3, 24).

Initiating Early Detection Programs and Public Awareness Campaigns to Control Breast Cancer in Iraq:

Promoting simple early detection policies for the control of breast cancer in Iraq should be accompanied by initiating comprehensive evidence based public health awareness campaigns. It is mandatory to establish massive nationwide programs for raising the awareness

of the female population on the signs and symptoms of breast cancer, its risk factors and the recommended approaches for the prevention and early detection of the disease. Within that context, the Ministry of Higher Education and Scientific Research (MOHESR) and the Ministry of Health (MOH) have already initiated active steps to promote early detection and public health awareness among the Iraqi women.

In 2000, a National Program for Early Detection and Down Staging of Breast Cancer was initiated by MOH in collaboration with MOHESR and WHO. Since then, referral centers and specialized clinics for early detection of breast cancer were established in the major hospital all over Iraqi governorates. Within those facilities, the relevant screening techniques are practiced routinely including: CBE, BSE, mammography, ultrasonography and fine needle aspiration biopsy. That national program follows a multidimensional approach to achieve its goals represented by ensuring the provision of high quality diagnostic and treatment services, capacity building and encouraging public health education. Its plan of action has been expanded both horizontally and vertically and at the present time it has incorporated the primary health care sector where CBE is practiced.

To ensure the implementation of the aforementioned targets, and emphasizing the role of research as one of the basic pillars in the adoption of the national cancer control strategy, the "Iraqi National Breast Cancer Research Program - INBCRP" and its National Breast Cancer Research Center were established by the Iraqi MOHESR⁽²²⁾. The main strategic objectives included raising awareness of the general population to the common signs and symptoms of cancer in general and breast cancer in particular, promoting knowledge and research on the topics of cancer control and upgrading skills of the health professionals on the techniques of early detection of cancer. In

collaboration with the International Agency for Research on Cancer (IARC) and WHO, the leadership of that Iraqi research program developed a comprehensive data base to document the demographic characteristics, clinic pathological presentations and management outcomes of breast cancer patients in Iraq. That information system was the basis for establishing a Regional Comparative Breast Cancer Research Project in the Middle East under supervision of WHO, IARC and the National Cancer Research Center in Iraq⁽²⁵⁾.

The freely offered screening services, seminars and public health educational material provided by the aforementioned Iraqi national programs have consequently supported in spreading the information about breast cancer locally. Endorsing such steps by the government through urging media network to advertise freely on that topic, posting adds on journals, super malls, and streets are vital measures that could support in directing the attention of the lay Iraqi woman to the significance of detecting and controlling the disease.

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