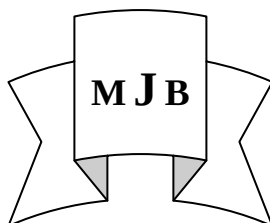


Study of Some Reproductive and Hormonal Risk Factors in Patients with Breast Cancer

Saad Merza Al-Araji Hala Ali Abdulhussein Alaa Sadeq Al-Awad
Dept. Surgary, College of Medicine, University of Babylon, Hilla, Iraq.
Babylon Health Directorate, Hilla, Iraq.



Abstract

Breast cancer is the commonest malignancy in females and it has become a major health problem affecting women, worldwide.

Cancer cells are abnormal cells, grow and divide more quickly than healthy cells. Some cancer cells form growths called tumors. All tumors increase in size, but some tumors grow quickly, others slowly. Cancer cells can spread to other parts of the body through the blood and lymph systems, This is called metastasis.

The aim of the study is to find the percentage of multiparous patients and the so the effect of parity state on the incidence of breast cancer, then their ages at first pregnancy and number of their children

This study lasted from November/2010 to May / 2011. There were 100 patients. These patients were ranged from 26 to 75 years. Full detailed information were taken from the patients in regarding the state of parity ,age of patient at first pregnancy and the number of children .

Seventy five percent of our one hundred patients were multiparous and twenty five percent were nulliparous ,age of patients at first pregnancy were as 34.7% at age ≤ 20 year, 37.3% at the age group 21-25 years, 16% at the age group 26-30 years, 5.3% at age group 31-35 years and 6.7% at age group 36-40 years ,Those parous patients show 20% of them had 1-2 children , 44% had 3-4 children, 17.3% had 5-6 children, 13.3% had 7-8 children and 5.3% had > 8 children .

Breast cancer is a multifactorial disease with different parameters affecting its occurrence and then metastasis ,75% of patients were multiparous and high percentage of them were less than thirty years indicating poor out come ,while in regarding to the number of children in parous women , high percentage of patients were having higher parity rate .

دراسة بعض العوامل الإنجابية والهرمونية للمريضات المصابات بسرطان الثدي

الخلاصة

سرطان الثدي هو الأكثر شيوعاً في الإناث وقد أصبحت مشكلة صحية كبيرة تؤثر على النساء، في جميع أنحاء العالم .
تعد الخلايا السرطانية خلايا غير طبيعية تنمو وتنقسم أسرع من الخلايا السليمة و تُشكل بعض الخلايا السرطانية نمواً يسمى الورم .جميع الأورام يزداد حجمها، لكن بعض الأورام تزداد بشكل سريع، والبعض الآخر يزداد بشكل بطيء .يمكن أن تنتشر الخلايا السرطانية إلى أجزاء أخرى من الجسم عبر الدم والنظم الليمفاوية ، وهذا يطلق عليه النقيلة.
الهدف من هذه الدراسة هو تحديد النسبة المئوية للمريضات ذوات الحمل المتعدد ودورها في سرطان الثدي وبعد ذلك دور عمر الأم في أول حمل و عدد الأولاد لمائة مريضة عراقية مصابة بسرطان الثدي .
هذه الدراسة استمرت من شهر تشرين الثاني / ٢٠١٠ إلى شهر أيار / ٢٠١١ وقد كانت لدينا مئة مريضة تتراوح أعمارهن من ٢٦ إلى ٧٥ سنة . تم اخذ معلومات كاملة من المريضات بما يخص الحالة الإنجابية وأعمارهن في أول حمل وعدد الأولاد .

٧٥% من النساء هن من ذوات الحمل المتعدد و ٢٥% هن من النساء الأتي ليس لديهن أطفال ، وبما يخص عمر الأم في أول حمل كانت ٣٤,٧ % من النساء هن اقل أو يساوي ٢٠ سنة ٣٧,٣% من عمر ٢١-٢٥ سنة ١٦% منهن كانت أعمار بين ٣٦-٤٠ سنة
بما يخص النساء ذوات الحمل المتعدد أظهرت النتائج ٢٠% من النساء لديهن ١-٢ طفل ، ٤٤% لدين ٣-٤ طفل ١٧,٣% لديهن ٥-٦ طفل ، ٣,١٣% لديهن ٧-٨ طفل و ٥٣% لديهن أكثر من ٨ طفل .

Introduction

Breast cancer is the most common malignancy among women in most developed and developing regions of the world with nearly a million new cases each year. It accounts for nearly 21% of all cancers among women worldwide [1]

Breast cancer in many developing countries presents in younger patients with advanced stages at the time of diagnosis in comparison with developed countries, undoubtedly, poor screening and education programs are the main contributing factors for this difference [2].

In Iraq, according to Iraqi cancer registry [3], breast carcinoma was the most frequent cancer among women. It forms 14.3% of all malignant tumors with average age of patients with breast carcinoma is 45 years.

Breast cancer pathogenesis had been concerned by [4], and they had been documented that breast cancer is a heterogeneous disease with variable biological and clinical characteristics because of its different genetic makeup.

The environmental factors that play role in the pathogenesis of breast cancer are mainly related to reproductive and hormonal factors which determine the exposure of women to circulating estrogens such as age of menarche, age of first full term pregnancy, number of children, breast feeding practices, age of menopause, use of hormone replacement therapy or usage of oral contraceptive pills, etc [5].

A lady suffering from Breast Cancer might presented with lump, dimple or thickening in the breast that is usually painless [6]. Sometimes the patient might presented with enlarged lymph node in the axilla. Changes in the shape, size, texture or colour and pain of the breast are also recorded as being an alarming signs of breast abnormality [7]

Any abnormality in the nipple should be checked carefully like retraction, discharge, crusting or erosion and change in colour or texture [7, 8].

Nulliparous women have an increased risk of developing breast cancer, on the other hands the older the woman with childbearing, the higher her risk of having breast cancer as reported by [9] with relative risk of developing breast cancer is estimated to increase by 3% for each year of delay [10].

Childbearing reduces the risk of breast cancer and the higher the number of full-term pregnancies, the greater the protection. Risk of breast cancer reduces by 7% with each full-term pregnancy, and overall women who have had children have a 30% lower risk than nulliparous [10].

Reproductive and hormonal factors indicate a 'menstrual cycle effect'. During the monthly cycle a woman's fluctuating hormone levels cause several changes within breast tissue, which are repeated every month. These changes possibly encourage or amplify abnormalities in the cell repair processes within breast tissue, which can in some cases lead to breast cancer later in life [11].

Materials and Method

This study lasted from November/2010 to May / 2011. There were 100 patients. These patients age were ranged from 26 to 75 years. Full detailed information were taken from the patients in regarding the state of parity ,age of patient at first pregnancy and the number of children .

Results

One hundred patients presented with breast cancer. Seventy five percent of all these patients were multiparous and twenty five percent were nulliparous as in fig.(1) .

In regarding to the age of patients at first pregnancy they were 34.7% at age ≤ 20 year, 37.3% at the age group 21-25 years, 16% at the age group 26-30 years, 5.3% at age group 31-35 years and 6.7% at age group 36-40 years as in fig. (2).

Those parous patients show 20% of them had 1-2 children , 44% had 3-4 children, 17.3% had 5-6 children, 13.3% had 7-8 children and 5.3% had > 8 children as in fig.(3).

Discussion

Breast cancer is one of the most aggressive and life threatening cancer . Several factors shared in the pathogenesis of this cancer [12] .

Nulliparity And Age At First Pregnancy:

In this study 25% of patients were nulliparous and 75% were multiparous, among the multiparous patients, 34.7% were ≤ 20 years ,37.3% in age group 21-25years and lower results observed at age groups 31-35years and 36-40 years as 5.3% and 6.7% ,respectively .

This study is agreed with other studies in the part of nulliparity but not in the part of age at first pregnancy in which the results were worse towards the older females at first pregnancy [13] , also other studies shared in the risk of nulliparity and age at first pregnancy of 35years and more [14].

This work is also shared in the opinion with [15 , 16 , 17] . It has been reported by (18) that 13% of their patients were nulliparous ,28.9% were aged ≤ 20 ,35.1% at age between 21-25years ,16.3% at age between 26-30 years and 6.7% at the age ≥ 31 .

On the other hands a study found that nulliparous women were not at increased risk for breast cancer compared to parous women [19] while other study found increased breast cancer risk for parous women [20].

The high percentage of parous patients is might be due to the high marriage rates in Iraqi families in contrast to that of the western countries and also to the consanguinity marriages that usually occurred in the young females that are usually of low socio-economic status and of low education ,so on the other hands older ages at first full term might related to the delayed marriage that is might be associated with higher in level of education , while in western countries there is a high rate of late marriage and so later pregnancies. Other reason is might be due to small samples collected in these age group .

Parity And Number Of Children And Breast Cancer :

This work shows high percentage of cancer as 20% in children number of (1-2), 44% in(3-4) and shows low percentage associates with high parity as 13.3% in 7-8 number of children and 5.3% in >8 .

Our study shared opinion with other study who reported 13% of their patients had one child ,51.3% had 2-3 children and 35.6% had ≥ 4 [18] .

Our study agreed with two studies[21]; [22] , and with other study who showed the same results among Chinese patients [23]

In western countries ,high parity reported mean ≥ 2 which is differ from our middle east countries that consider this number to be regarded as a small family which is related to delayed marriage in western countries.

Conclusions

Our study was one of the Iraqi studies that explored some of the reproductive factors among Iraqi females presented with breast cancer ,yielded many findings:

1. Breast cancer is a multifactorial disease with different parameters affecting its occurrence and then metastasis .
2. High percentage of patients were multiparous .
3. In regarding to the age of first pregnancy ,high percentage of patients were less than thirty years indicating poor out come .
4. In regarding to the number of children in parous women , high percentage of patients were having higher parity rate .

Recommendations

Based on the multiple observations in this study we recommend the following:

1. Encourage monthly self breast exams and annually exam by doctor if the lady is over 40 years.
2. Having a mammogram each year after age 40.

3. Further investigation of larger number of patients with breast cancer in a prospective study with a longer duration of follow-up and studying the survival rates will provide a better insight and validate our findings.

4. Considering further studies including DNA/mRNA and protein levels by FISH or PCR to confirm the genetic bases behind breast cancer and their effects with our result.

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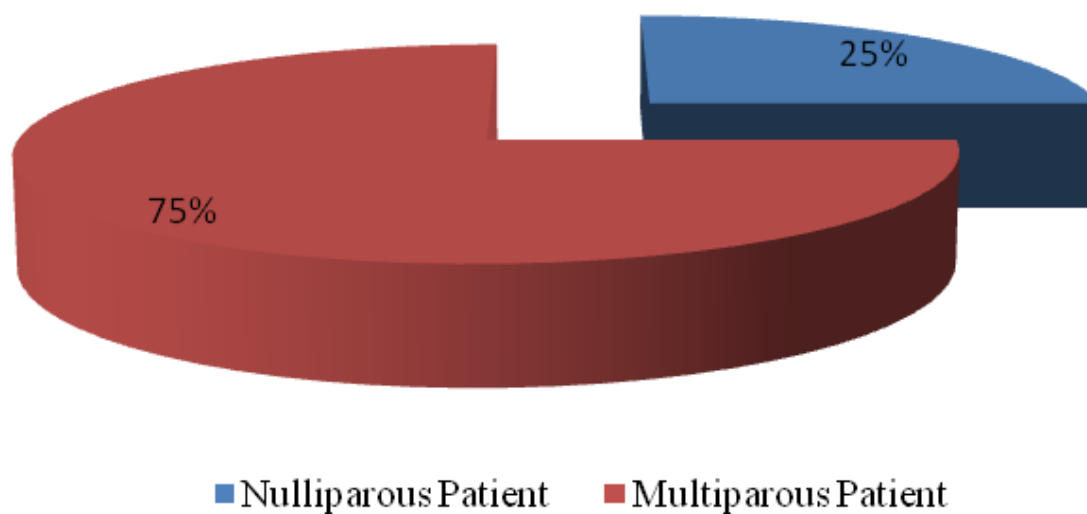


Fig. 1 State of parity in patients with breast cancer

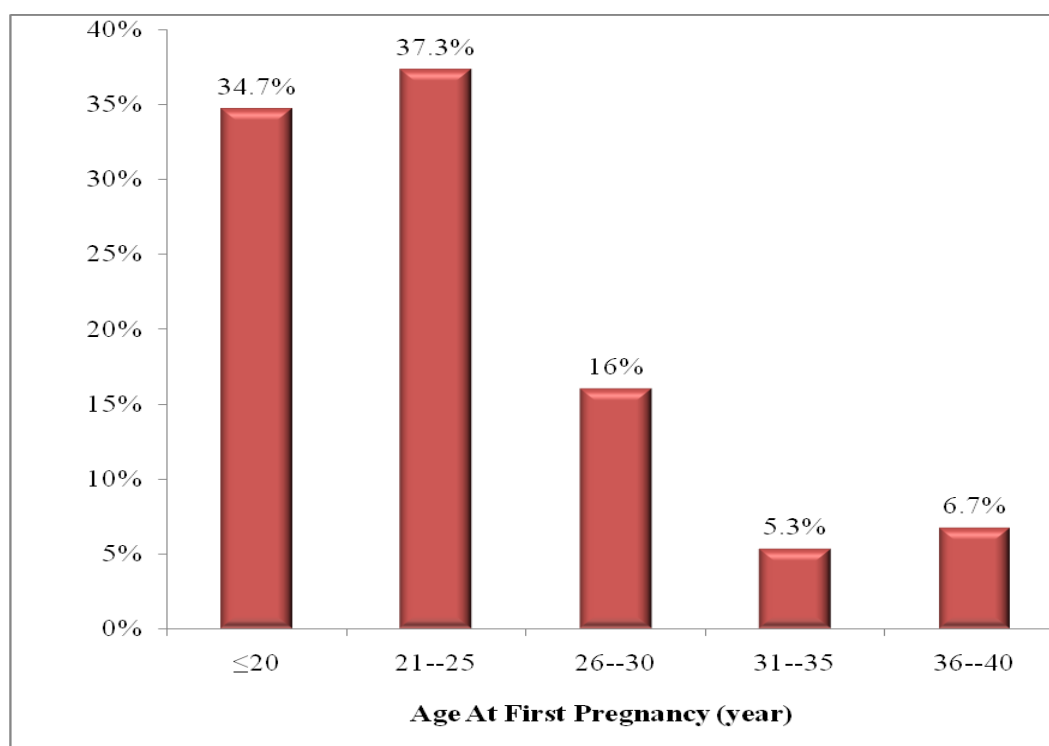


Fig 2 The age at first pregnancy in patients with breast cancer

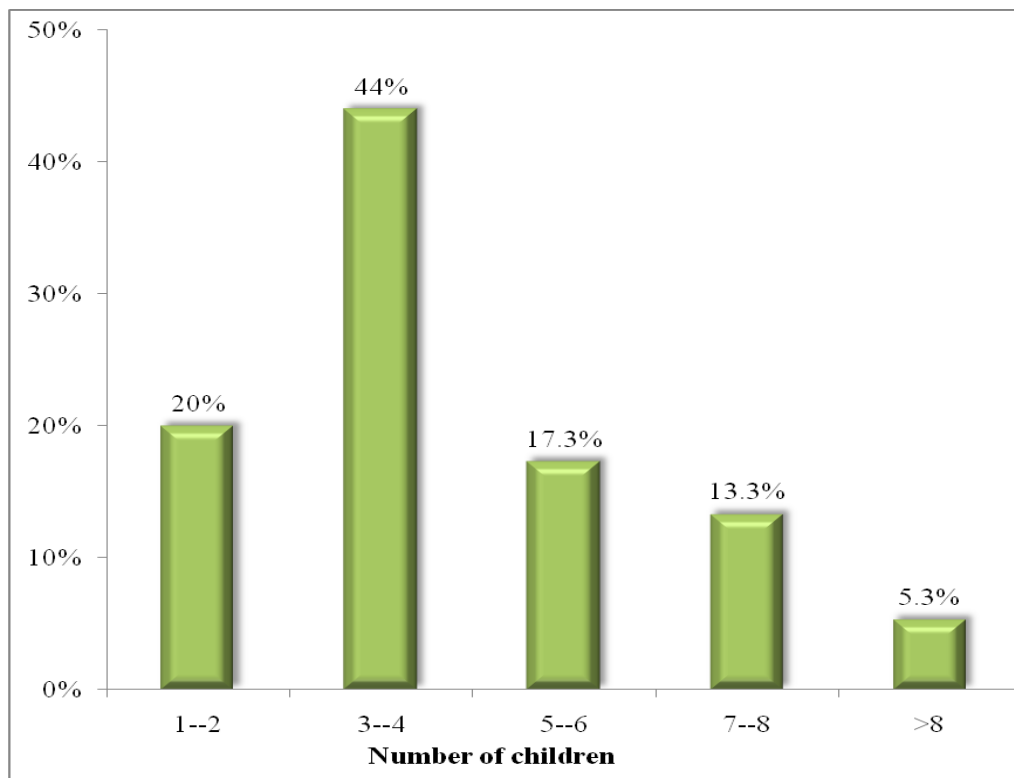


Fig. 3 Number of children in patients with breast cancer.