

Frequency of early postoperative complications of breast cancer following modified radical mastectomy

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ABSTRACT

infection, parasthesia, hematoma, hemorrhage, flap necrosis and muscle paralysis.

Results: Age factor was analyzed in a study cases which showed a highest case frequency in the age group of 36 -40 years old as compared to a lowest figure in the group of less than 25 years old. Early postoperative complications were seroma, lymphedema, wound infection, parasthesia, hematoma, hemorrhage, flap necrosis and muscle paralysis with their frequencies of 56, 37, 17, 18, 2, 0 , 8, 3 and 3 of total number respectively.

Conclusion: Early postoperative detection of breast cancer related surgical complications is essential through appropriate postoperative care.

Background: Breast cancer is a common cancer in female and many surgical options are undergone for its treatment. Modified radical mastectomy with axillary clearance is one of the common options with certain early and late postoperative complications. We conducted a retrospective study to evaluate the pattern of early postoperative complications of established breast cancer women.

Patients and methods: A total of one hundred and fifty patients were seen in AL-Fayhaa General Hospital between the period of November 2008 and June 2014, entered the study and those were analyzed in terms of general patient data in respect to age as well as analysis of early postoperative complications regarding seroma, lymphedema, wound

Key words: Breast cancer, mastectomy, early complications.

INTRODUCTION

Breast cancer is the most common cancer in women [1]. It is the 2nd most common cause of death from cancer among females [2]. In England and Wales has the highest mortality for breast cancer (27.7 per 100,000 populations) [3]. Women of Eastern Asia and middle Africa ranked lowest incidence of breast cancer among all nations according to International Agency for Research on Cancer (IARC) and World Health Organization (WHO) [4]. The incidence of new cases has been steadily increasing since the mid-1940s [5]. In the 1970s the probability of a woman in the United States developing breast cancer was estimated at 1 in 13; in 1980 it was 1 in 11 and in 2004 the frequency was 1 in 8 [6]. The different surgical treatment options include simple mastectomy, modified radical mastectomy and breast conservative surgery [7]. The modified radical mastectomy or wide local excision with axillary dissection is standard treatment options for most patients with breast cancer. Seroma formation, skin flap necrosis and wound infection are the common early complications of breast surgery which increase the morbidity and mortality rate [8]. Postoperative wound infection is labeled if it occurs within one month after surgery [9]. The present study was undertaken to identify the pattern of early complications following modified radical mastectomy with axillary clearance for established cases of breast cancer in our health institution.

PATIENTS AND METHODS

This retrospective descriptive clinical study was carried out at AL-Fayhaa General Hospital, Department of surgery between November 2008 and June 2014. Patient demographics, past history, family history, recent history, drug history and accompanying systemic diseases were evaluated. Included patients were those more than 15 years of age, histopathologically proven cases of infiltrating ductal carcinoma (by multiple FNA or by excisional biopsy), patients with stage I, II and III breast cancer whose undergoing modified radical mastectomy. Also include patients with inflammatory breast cancer, immunocompromised patients such as DM, TB, HIV, other malignant cases and those who received preoperative chemotherapy. This study was conducted in the department of surgery of AL-Fayhaa General Hospital in Basra. The female patients following the selection criteria presented to outpatient department and were identified with breast cancer undergoing modified radical mastectomy, after the written informed consent. Ethical approval of was granted by the ethical approval board of the institution. The modified radical mastectomy was conducted by surgeons of more than 5 years of post-fellowship experience. Patients were discharged by the second day of surgery and were followed up at the outpatient clinic every week for the first six weeks for the evaluation of

early complications such as wound infection and seroma formation.

All the relevant demographic information such as age and clinical information such as stage of breast cancer along with the final complications at the end of six weeks were noted. Data were analyzed using SPSS 18.0 software, with non-probability purposive Sampling technique was adapted.

RESULT

A total of one hundred and fifty patients were seen in AL-Fayhaa General Hospital between the period of November 2008 and June 2014, entered the study and those were analyzed

in terms of general patient data in respect to age as well as analysis of early postoperative complications regarding seroma, lymphedema, wound infection, parasthesia, hematoma, hemorrhage, flap necrosis and muscle paralysis. The age-distribution for breast cancer across a study sample is summarized in Table (1). The highest age group was (36-45) while a lowest age group was (less than 25). The distribution of breast cancer related early complications is described in Table (2). The most common complication was seroma as compared to hemorrhage which was a lowest complication. Details of the early complications are presented in table (2).

Table (1): Age distribution of patients undergoing surgery

Age in years	Number of patients (N=)	Percentage (%)
Less than 25	0	0
25-35	13	8.6
36-45	61	40.6
46-55	34	22.6
56-65	26	19.3
Above 65	13	8.6

Table (2): Early complications following modified radical mastectomy

Complications	Number of patients (n=)	Percentage (5)
Seroma	56	37.3
Lymphedema	37	24.6
Wound infection	17	11.3
Parasthesia	18	12
Hemorrhage	2	1.3
Hematoma	0	0
Skin flap necrosis	8	5.3
Muscle paralysis	3	2
Wound dehiscence	3	2

DISCUSSION

Many surgical options are adopted for treatment for breast cancer. Modified radical mastectomy with axillary clearance is the most commonly procedure underwent [10]. The morbidity issue is discussed in variety of articles and been categorized as early and late surgical complications. Early ones are seroma, lymphedema, wound infection, parasthesia, hematoma, hemorrhage, flap necrosis and muscle paralysis. Late complications include shoulder stiffness, brachial plexopathy and psychosexual disturbances. Concerning the early complications, the most common one is seroma which was seen in 56 patients (37.3 %) as compared to other results of other published articles which showed a seroma rate range between 4.2 % - 89 % in undrained axilla and as high as 53 % in drained axilla [11]. Another study reported that seroma formation following

modified radical mastectomy with axillary lymph node dissection for breast cancer is a most common wound complication. It occurs in approximately 50% of patients undergoing mastectomy [12]. The overall Seroma rate was 15.8% in study by Gonzalez EA et al [13]. The Seroma formation can be prevented by insertion of suction drain deep to mastectomy flaps in the axilla [14]. The Seroma in our study was easily managed with aspiration and pressure. The second common complication which was observed in our study was lymphedema of the arm. This complication was observed in 37 (24.6%) of patients. Other articles showed values of 28 % [15] and 26% [16]. The wound infection occurred in 17 (11.3%) of our patients as compared to 3.6 % in a study by Lang C J [17]. Many factors are increase the incidence of wound infection such as malnutrition, improper

hygiene of patient, improper sterilization, the drain and frequent wound dressing. Wound infections cases were treated by antibiotics and daily wound dressing. Parasthesia is observed in 18 (12 %) of patients as contrasted by Abdullah TI [18] study which reported Parasthesia in 14.3% patients. Improper hemostasis is regarded a common cause of hematoma formation and the latter is not reported in our study as reports of other literature which were 5 % and 0.85 % of Knag BJ [19] and Borwn MH [20] respectively. Hemorrhage is seen in 2 (1.3%) of our cases as contrasted by 3.9% of Waqar et al [16]. This large difference is probably due to small sample size of Brown MH study as compared to this study. Skin flap necrosis is shown in 8 (5.3 %) of our patients while in other published reports the rate was about 7.9 % as in Mizuno H [21] and 9.52% as in Bernard RW [22]. Tension skin closure can attribute to skin flap necrosis and skin grafting might be required in treatment issue. Also this large difference is due to small sample size of Bernard RW study as compared to this study. Muscle paralysis can occur due to injury to long thoracic nerve supplying Serratus anterior muscle causing winged scapula. This study showed paralysis of Serratus anterior muscle in 3 (2%) patients. Abdullah TI 18 reported muscle paralysis in 2.2% of patients. Wound dehiscence is reported in our study by three cases (2 %) as compared to 1.3 % in Farkhanda et al [23].

Early postoperative detection of breast cancer related surgical complications is essential through appropriate postoperative care.

CONCLUSION

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المضاعفات المبكرة بعد استئصال الثدي والإبط لمعالجة سرطان الثدي

الملخص

المقدمة: يعتبر سرطان الثدي من أكثر الأمراض التي تصيب النساء، وهو المرض السرطاني الثاني المؤدي للموت في العالم بعد سرطان الرئة. عملية استئصال الثدي والعقد اللمفاوية للإبط تعتبر من العمليات العلاجية المعروفة والأكثر انتشاراً في العالم لعلاج هذا المرض والتي لا تخلو من المضاعفات البسيطة منها أو المعقدة مثل تجمع السوائل تحت الجرح والإبط، تورم الطرف العلوي، التهاب الجرح وغيرها.

طريقة العمل: البحث هو دراسة بأثر رجعي لمعرفة نسبة المضاعفات التي تحدث بعد عملية استئصال الثدي والإبط التي أجريت في مستشفى الفيحاء العام في محافظة البصرة لـ ١٥٠ حالة سرطان ثدي مشخص مختبرياً للفترة من تشرين الثاني ٢٠٠٨ إلى حزيران ٢٠١٤، ومقارنتها بنتائج البحوث العالمية الأخرى.

النتائج: لوحظ أن أكثر المصابين ضمن الفئة العمرية بين ٣٦ الى ٤٥ سنة وان تجمع السوائل تحت الجرح والابط هي أكثر المضاعفات حدوثاً بعد استئصال الثدي والإبط تتبعها تورم الطرف العلوي نتيجة تجمع السوائل المفاوية، وهذه النتائج مقارنة لنتائج البحوث العالمية الاخرى.

التوصيات: من التوصيات التي تم التوصل إليها هو مراقبة حدوث هذه المضاعفات والتعامل معها وعلاجها بوقت مبكر قبل استفحالها.