

The evaluation of nipple discharge from the breast diseases

Mustafa K. Hameed

Dept. of Surgery, College of Medicine, Tikrit University

Abstract

Nipple discharge is a symptomatic problem that causes many women both discomfort & anxiety and may be a first complain of the patient and lead to a serious problem. The main age affected with an abnormal nipple discharge was from 30-50 years. The common type of nipple discharge was bloody and this type is the most serious one because of there is a strong relationship with malignancy. The bloody and purulent nipple discharge is the most common types associated with breast masses. The unilateral nipple discharge is more common than bilateral and the left breast is more commonly affected.

Key word: Nipple Discharge, Breast mass.

Introduction

Nipple discharge is the release of fluid from the nipple it is very common. There are 15-20 milk duct opening onto each nipple .Discharge can come from one or more of these ducts. Spontaneous nipple discharge unrelated to pregnancy or breastfeeding is considered abnormal (1,2).

The human breast has a tubuloalveolar structure and consist of 15-25 lobes radiating from the nipple .Each lobes is sub divided into lobules from which emerge lactiferous ducts .True discharge comes through mammary ducts out the nipple and may be noted to drain spontaneously and stain clothing ,or may be elicited by segmental palpation of breast tissue. Differentiation of the seven basic types of nipple discharge can be determined :- (1, 2, 3, 4)

- Milky-white discharge.
- Multi-colored gummous-sticky discharge .
- Purulent –pus ,
- Watery –colorless discharge.
- Serous –faint yellow.
- Serosanguinous-thin .
- Bloody.

Nipple discharge is a symptomatic problem that cause many women both discomfort and anxiety. The causes of nipple discharge are not well understood .However ,nipple discharge is

most commonly associated with endocrine alteration and /or medications (1, 3, 4). These often result in duct ectasia and/or fibrocystic changes in the breast. Changes are often bilateral and may lead to bilateral discharged from one or several nipple ducts .Nipple discharge occurs in people of all races, also can occur in both males and females, although it occurs predominantly in females .nipple discharge can occur in patients of all ages ,from infants to adults (4).

The most common types of nipple discharge are bilateral, emanate from several ducts in the same nipple, and vary in color from white to brown. To be clinically significant, nipple discharge must be true, spontaneous, persistent, and nonlactational(5).

The common causes of breast discharge are: (4, 5, 6)

- Unknown (idiopathic).
- Hormonal imbalance.
- Medications: Antidepressants(monoamine oxidase inhibitors), Anxiolytics, (alprazolam), Antihypertensives (atenolol, methyldopa), Antihypertensive (atenolol, methyldopa), Antipsychotics (phenothiazines), Histamine H2 agonist (cimetidine, ranitidine), Histamine H2 agonist (cimetidine, ranitidine), Synthetic hormones, and Oral contraceptives.

-Breast irritation or stimulation (scratchy clothing, ill-fitting bras, sexual arousal).

-Pregnancy.

-Duct ectasia.

-Intraductal papilloma.

-Thyroid disorder(galactorrhea).

Rare causes of nipple discharge :

-Abscess (subareolar).

-Prolactinoma.

-Breast cancer.

-Herbal preparations(red clover, blessed thistle, fennel).

-Street drugs (cannabis, opiates).

-Trauma to the breast.

-Kidney failure/renal disease.

Nipple discharge is a common breast problem that has been reported in 10-15% of women with benign breast disease and in 2.5% of women with breast cancer. Bilateral nipple discharge usually has a physiological cause, such as hyperprolactinemia leading to galactorrhea. It can also occur in breast disease that is bilateral, such as mammary duct ectasia. This is a benign condition occurring in postmenopausal

Women, characterized by dilatation of the ducts, nipple secretions and periductal inflammation (5, 6).

Every woman with a unilateral, spontaneous, clear, watery, serous, or bloody discharge should be referred for diagnostic imaging evaluation (5, 7).

The aims of the study are to determine the most common nipple discharge that related to a serious breast diseases and the age and to know the relationship between nipple discharge and breast carcinoma.

Patients and Methods

Seventy three women with nipple discharge (spontaneous nipple discharge in nonlactating breast) were followed in Tikrit teaching hospital between January to June(2008). The patients undergo frequent clinical examination and cytological examination and radiological

studies (ultra sound & mammography) done for them and also histopathological studies (Fine needle aspiration& biopsy).The investigations & the lines of suitable management done for the patients according to their needs.

Results

The common age group of women complaining from nipple discharge was from 30-39 and second common group was 40-49. (Table 1). The incidence of malignant breast diseases increasing with increasing in age.

The most common type of nipple discharge were bloody nipple discharge and purulent nipple discharge and less common types were watery and serosanguous nipple discharge. (Table 2).

There is a strong relationship between nipple discharge and breast masses. High numbers of bloody and purulent nipple discharge were associated with breast masses. In the other hand the other types of nipple discharge were associated with breast masses but in less number.(Table -3-).

Abnormal nipple discharge are more common with benign than malignant breast diseases. The bloody nipple discharge is strongly related with malignant breast diseases. The purulent, serous, serosanguous types are also associated with malignant breast diseases but less common than bloody nipple discharge. Watery and white nipple discharge had no relation with malignant breast diseases.(Table -4-).

Unilateral nipple discharges with benign and malignant breast diseases are more common than bilateral nipple discharge. Nipple discharge with benign and malignant breast diseases is more common in the left breast than in the right breast.

Discussion

Spontaneous nipple discharge in non-lactating breast is an abnormal clinical sign that should be investigated.

The appearance and character of the discharge have a definite prognostic value and often reflect the type of underlying lesion. In this regard, the bloody discharge could represent the first sign of malignancy, while the serous, purulent and milky often represent benign lesion (7, 8).

The most common age group in our study was (30-39 & 40-49), this result similar to studies done in which the peak incidence of nipple discharge between the age of 35-50 (8, 9).

The incidence of malignancy of patient with nipple discharge increasing with age & this is similar to study done in which the incidence also increasing with age & this may be due to decrease number of benign breast disease after the age of 50 years (9, 10, 11).

The bloody nipple discharge was in the majority of cases in both benign and malignant breast disease (41%) and this is similar to other studies that stated bloody nipple discharge more disaster to the female than other types of discharge, so she visit the doctor (9, 12, 13).

The largest number of cases are associated with the breast mass and this result not similar to previous studies in which the majority of cases are not associated with breast mass and this is due to that our community need more health education regarding breast diseases that make the patient come more earlier to the doctor and not neglect even simple breast complain and also our patient should do regular breast examinations even in normal to early detection of any breast problem (9, 10, 15).

Abnormal nipple discharge are more common with benign than in malignant breast diseases and this result similar to previous findings (11, 15).

Bloody nipple discharge is more common type in malignant breast disease rather than other types of discharge and this result strongly similar to other studies (12, 15).

Unilateral nipple discharge are more common than bilateral and this similar to other studies that large number of female believed that bilateral nipple discharge caused by normal physiological changes, while unilateral discharge due to serious problem (16, 17).

The unilateral nipple discharge is more common than bilateral discharge in malignant breast diseases (7, 11, 14).

Left breast is more common affected than the right breast in both benign and malignant nipple discharge, and this is similar to previous studies (9, 17).

The present study conclude that:- Any type of nipple discharge mainly bloody and purulent should not be neglected because it may be the presentation of serious breast problem. Also, regular visit to the out patient department even in simple breast complain may help to early detection and management of a serious breast problem.

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Table (1) The age distribution of patient complaining from nipple discharge

Age	Number of patient	%
10-19	5	6.8
20-29	9	12.3
30-39	23	31.5
40-49	21	28.7
>50	15	20.5
Total	73	100

Table (2) The types of nipple discharge

Types of N.D	NO.	%
Bloody	30	41
Purulent	21	28
White	9	12.3
Watery	4	5.4
Serous	7	9.5
Serosangous	2	2.7
Total	73	100

Table (3) The relation between types of nipple discharge and presence of breast mass.

Type of N.D.	With mass	%	With out mass	%	Total
Bloody	19	46.3	11	45.8	30
Purulant	12	29.2	9	37.5	21
Serous	4	9.7	3	12.5	7
Serosangous	1	2.4	1	4.1	2
White	4	9.7	5	20.8	9
Watery	1	2.4	3	12.5	4
Total	41	100	32	100	73

Table (4) The relationship between the types of nipple discharge and the breast diseases(Benign or malignant)

Types of N.D.	Benign breast dis.	%	Malignant breast dis.	%	Total
Bloody	18	33.3	12	63.1	30
Purulant	18	33.3	3	15.7	21
Serous	5	9.2	2	10.5	7
Serosangous	1	1.8	1	5.2	2
White	8	14.8	1	5.2	9
Watery	4	7.4	0	-	4
Total	54	100	19	100	73

Table (5) The relationship between the site of nipple discharge and the benign and malignant breast diseases

	Unilateral				Bilateral		Total	
	Right breast	%	Left breast	%				%
N.D.with Benign	18	33.3	20	37	16	29.6	54	100
N.D.with Malignant	7	36.8	10	52.6	2	10.5	19	100