ISSN 2958-6607

JOURNAL OF AD-DIN AKIJ MEDICAL COLLEGE

Vol. 01 | No. 01 | July 2022

JAMC

Contents

An Official Organ of Ad-din Akij Medical College

ISSN: 2958-6607

JOURNAL OF AD-DIN AKIJ MEDICAL COLLEGE

Vol 01 No 01 July 2022

The Journal of Ad-din Akij medical College is an official organ of Ad-din Akij medical College, Khulna, Bangladesh. It's published biannually in January and July both in print and electronic form. This is a peer reviewed journal.

ISSN: 2958-6607

JOURNAL OF AD-DIN AKIJ MEDICAL COLLEGE

Vol 01 No 01 July 2022

Published by

Prof. Dr. Md. Ashfaqur Rahman
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Boyra, Khulna 9000. Phone: +8801714108016 , Fax: 8317307,
e-mail: akijmc@ad-din.org, Website: www.ad-din.org

Printed by

Ad-din Printers
Dhaka Road, Sheikhhati, Jashore Bangladesh

JOURNAL OF AD-DIN AKIJ
MEDICAL COLLEGE

Vol. 1 ▮ No. 1 ▮ July 2022
JAAMC 2022; 1(1): 03−07

Author Guidelines

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1. Hou WR, Hou YL, Wu GF, Song Y, Su XL, Sun B, et al. cDNA, genomic sequence cloning and overexpression of ribosomal protein gene L9 (rpL9) of the giant panda (Ailuropoda melanoleuca). Genet Mol Res. 2011;10: 1576-1588.
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JOURNAL OF AD-DIN AKIJ MEDICAL COLLEGE

Vol. 1 ▮ No. 1 ▮ July 2022
JAAMC 2022; 1(1): 08−10

EDITORIAL

Hand, foot and mouth disease: current understanding of the aetiology, epidemiology, and prevention of clinical symptoms

The first hand, foot, and mouth disease (HFMD) was reported in New Zealand in 1957. It was named after its clinical characteristics and has caused millions of attacks and multiple global epidemics. Over the past decade, HFMD has become more prevalent in the Asia-Pacific region and a significant global public health issue (1-6). As well as frequent infection in East and South-East Asia during the hot and humid season among children aged 1 to 5. In crowded and enclosed situations, such as kindergartens and child daycare centers, infected droplets can rapidly spread by sharing objects and surfaces (fomites) (7). This infectious childhood disease is characterised by sores in the mouth and rashes on the hands and feet caused by a virus. Most patients experience moderate symptoms, including low-grade fever, rashes, and herpes on the hands, feet, and lips. A few patients may develop meningitis, encephalitis, pulmonary oedema, and circulatory issues and may even perish from the disorders (8)

Infection occurs via direct touch, droplets, respiratory secretions such as saliva, sputum, and nasal discharge, contact with blister fluid from infected individuals, and other excretory materials of an infected individual. In addition to coxsackievirus A16 and enterovirus 71, different strains of coxsackievirus and enterovirus may cause the disease (9, 10). There are more cases found in Bangladesh during the monsoon season and fewer during the dry season. Clusters of HFMD instances occur between June and October, when the monthly average temperature, total rainfall, and humidity are at their highest levels of the year compared to the dry season [11]. The hand, foot, and mouth disease is typically diagnosed clinically. Approximately six weeks after infection, the virus can be discovered in the stool; however, the duration of virus shedding from the oropharynx is often less than four weeks. Light microscopy of vesicle biopsies

Note: Adapted from "Enterovirus-Associated Hand-Foot and Mouth Disease and Neurological Complications in Japan and the Rest of the World", by Gonzalez G, Carr MJ, Kobayashi M, Hanaoka N and, Fujimoto T, 2019, Int. J. Mol. Sci, 20(20):5201.

or scrapings distinguishes HFMD from varicella-zoster virus and herpes simplex virus. Although serology is not sensitive enough to diagnose HFMD, IgG levels can be used to track recovery. In some places, serology is employed to distinguish between enterovirus 71 and coxsackievirus since this distinction has prognostic importance. In most sites, polymerase chain reaction assays are currently available to confirm the diagnosis of coxsackievirus. Using real-time PCR, a lesion swab can detect coxsackievirus or enterovirus (12-14). Hand, foot, and mouth illness is a modest clinical condition that resolves in seven to ten days. Primarily, treatment is supportive. NSAIDs and acetaminophen can be used to alleviate both pain and fever. It is essential to ensure that the patient keeps adequately hydrated. In addition, a mixture of liquid ibuprofen and liquid diphenhydramine can be gargled to coat ulcers and alleviate discomfort (15, 16). It was discovered that steroids enhance the likelihood of severe HFMD (17). Education of patients and parents is essential for preventing the spread of HFMD among children and also between children and adults. Hand washing has been shown to be an effective method for preventing the spread of HFMD (18). A community intervention study revealed that parental and child personal hygiene improved as a result of rigorous teaching on hand hygiene procedures. Consequently, the incidence of HFMD in the study population decreased (19). Due to the possibility of severe sickness, parents should also be warned to keep their children away from immunocompromised individuals.

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Received: 10 Mar 2022
Accepted: 15 Mar 2022

ORIGINAL ARTICLE

JOURNAL OF AD-DIN AKIJ MEDICAL COLLEGE

Vol. 1 ❙ No. 1 ❙ July 2022
JAAMC 2022; 1(1): 11−18

Evaluation of breast lesions by fine needle aspiration cytology in Bangladeshi patients

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Received: 15 Feb 2022
Accepted: 13 Mar 2022

Abstract

Background: *The assessment of breast masses can benefit significantly from fine needle aspiration cytology (FNAC). Due to its quick, simple, and inexpensive methodology, it has grown in popularity. Its great accuracy, sensitivity, and specificity have led to its general acceptance for pathological assessment. The study examines the cytological information in aspirated smears from breast tumors. Breast lumps are divided into benign and malignant disorders.* ***Objectives:*** *This study aimed to evaluate the role of FNAC in examining breast lumps in Bangladeshi patients.* ***Materials and Methods:*** *This cross-sectional observational study was conducted in the Department of Pathology, Ad-din Akij Medical College, Khulna, from May 2021 to April 2022. In this study, seventy-nine samples of breast lumps were collected, processed, and stained with hematoxylin and eosin. All data were recorded in a pre-designed data sheet. Statistical analyses were carried out by using SPSS version 24 for Windows. A descriptive analysis was performed for all data. Observations were indicated by frequencies and percentages. Statistical significance was set at a "p" value<0.05. Result: In this study, The mean (±SD) age of the patients was 34.73 ± 10.55 years with the minimum and maximum ages of the patient being 20 years and 50 years respectively. The right breast was found affected more (49.4%) than the left breast. Most of the patients presented with mobile and painless breast lumps. The majority of the patients with breast lumps who presented below 40 years of age had benign lesions. Most of the malignant cases were found over 40 years of age. Fibroadenoma was the most common lesion (24.1%) followed by carcinoma of the breast (19%) identified in this study.* ***Conclusion:*** *Therefore, we concluded that FNAC is our nation's reliable and highly accurate diagnostic tool for breast lumps. Fibroadenoma appears to be most common in young persons—the malignant lesion increases in frequency beyond the age of 40. The results of the current investigation should be confirmed by a large-scale prospective study using standardized methodologies.*

Keywords: *Breast lesions, FNAC, squamous cell carcinoma, fibroadenoma*

Introduction

The breast is a vital component of the female reproductive system. But even among well-educated females, complaints about breast issues are widespread, resulting in their neglect and frequently delayed detection (1). A palpable breast tumor is a frequent diagnostic challenge for doctors and surgeons. Today's needle biopsy technology allows for the minimal surgical excision of benign breast illnesses compared to the accepted excision biopsy of the past (2).

The evaluation of palpable breast lumps now includes fine-needle aspiration cytology (FNAC) as a crucial step. An established and incredibly accurate technique for identifying breast lesions is fine-needle aspiration (FNA) biopsy. Although fine-needle aspiration (FNA) breast biopsy has been demonstrated to be a safe and accurate procedure, many surgeons doubt that it is trustworthy enough to replace excisional biopsy (3).

Common symptoms of benign, premalignant, or malignant lesions include palpable breast lumps, breast discomfort, and nipple discharge. A clinical breast examination, imaging, & cytological testing are three methods used to diagnose breast lesions. FNAC helps to prevent unnecessary procedures by bridging the gap between clinical assessment and the final surgical pathological diagnosis (1). The palpability and extent of the lesion affect the likelihood that FNAC will yield a conclusive diagnosis (4).

Young women can develop benign breast illnesses, and the incidence increases throughout the second decade of life. On the other hand, after menopause, malignant disorders become more prevalent (5, 6). The clinical symptoms of benign processes might range from completely asymptomatic to palpable nodularity, thickness, mass, discomfort, inflammation, or nipple discharge. Numerous signs and symptoms of different breast diseases are nonspecific, necessitating additional testing for a conclusive diagnosis. The benign lesions can be inflamed or proliferative and can develop from various types of cells (7).

One of the premalignant lesions that could indicate a higher risk of breast cancer is atypical ductal hyperplasia. The pathophysiology of breast cancer may be better understood if these conditions are well understood. Identifying high-risk groups may benefit from routine observation. The most prevalent malignant tumor in women worldwide is breast cancer. Differentiating a benign from a malignant lesion is the primary concern of the surgeon and the duty of the surgical pathologist because it is the leading cause of death (7).

In Bangladesh, fine-needle aspiration cytology (FNAC) is frequently utilized as a trustworthy, quick, economical, complication-free, and accurate diagnostic method for the diagnosis or therapy of breast masses. At the Ad-din Akij Medical College Hospital's Department of Pathology, a study was done to determine the efficacy of fine-needle aspiration (FNA) in the screening of palpable breast tumors.

Materials and Methods

Type of Study	Cross-sectional descriptive study
Place of study	Department of Pathology, Ad-din Akij Medical College and Hospital, Khulna
Study period	May 2021 to April 2022
Study population	All patients with clinically detected breast lumps in the Department of

	Pathology, Ad-din Akij Medical College during the specified time duration comprised the study population
Sampling technique	Consecutive sampling.

Inclusion criteria

1. Patients clinically detected with any breast lump.
2. Patients who had given written informed consent.

Exclusion criteria

1. Patients who had not given consent.
2. Those who had received chemotherapy or radiation therapy for breast carcinoma.
3. Inadequate smear.

Data collection

It was a cross-sectional descriptive study for which the Institutional Review Board had granted authorization to use cytology samples. After receiving adequately informed written consent from the patient who was a patient at the Ad-din Akij Medical College's Department of Pathology from May 2021 to April 2022, this study was launched. For this investigation, patients with breast lumps that had received a clinical diagnosis were chosen.

Procedure of Fine-needle Aspiration Cytology (FNAC)

Before beginning the FNAC, the patients are given a verbal consent document, and the technique is then explained to them. For each patient, an FNA is performed using a disposable 10mL syringe and a 23 gauge needle. The needle is injected into the palpable lesions once or twice, depending on the size of the nodule, without the use of a local anesthetic. A syringe is used to aspirate cellular material, which is then ejected onto slides. For each patient, four to five slides are prepared. Near the frosted end of a slide on a table, a small to medium-sized drop of aspirate is placed. Similar to how a peripheral blood smear is made, a second slide is used to disperse the aspirated material. The air-dried smears are stained with Papanicolaou stains, and each smear is wet-fixed in 95% methanol. The Ad-din Akij Medical College's Department of Pathology prepared smears according to protocol.

Under a light microscope, all prepared slides were inspected, and reporting was completed. The study's eligible patients were contacted after receiving the cytological results and offered to participate. Each patient's brief medical history was obtained after they gave their informed consent, paying close attention to their age, anatomical location, and current problems.

Data analysis

After compilation, the data was presented in the form of tables by meticulous checking and rechecking. Statistical analysis of the results was done by using computer-based statistical software, SPSS 24.0 version (SPSS Inc, Chicago, IL, USA). Results were shown as a table and expressed as frequency & percentage for qualitative data and mean ± SD for quantitative data. A ‘p-value <0.05 was considered statistically significant because all analyses were considered a 95% confidence level.

Results

An analysis of 79 cases of breast lesions was done in this study to evaluate the role of FNAC in the diagnosis of breast lesions.

Age groups of the patients

Among 79 patients, most of the patients in this study were in the age group between 20 to 30 years (n=24, 30.4%) followed by the age group 30-40 years (26.4%). The mean (±SD) age of the patients was 34.73 ± 10.55 years with the minimum and maximum ages of the patient being 20 years and 50 years respectively. The least commonly affected age was less than 20 years (Table-1).

Table 1: Distribution of the patients according to age (n=79)

Age group	Frequency	Percentage
<20	4	5.1%
20-<30	24	30.4%
30-<40	21	26.6%
40-<50	20	25.3%
>50	10	12.7%
Total	**79**	**100.0%**

Site of involvement

The right breast was found affected more (49.4%) than the left breast (Table 2). In 3.8% of cases, both breasts were found affected.

Table 2: Distribution of the patients according to the site of involvement (n=79)

Site	Frequency	Percentage
Right	39	49.4%
Left	37	46.8%
Both	3	3.8%
Total	**79**	**100.0%**

Clinical presentation

Most of the patients presented with mobile and painless breast lumps (41.8%) followed by painful lumps in 40.5% of cases **(Table 3)**.

Table 3: Distribution of the patients according to the clinical presentation (n=79)

C/F	Frequency	Percentage
Breast lump only	33	41%
Breast lump + Pain	32	40.5%
Breast lump + Pain + Nipple discharge	9	11.4%
Breast lump + Pain + Nipple puckering	5	6.3%
Total	**79**	**100.0%**

Cytological analysis

The study revealed that most of the cases with breast lumps were benign in nature (n = 57, 72.2%) whereas 9% &19% were premalignant and malignant cases respectively **(Figure 1).**

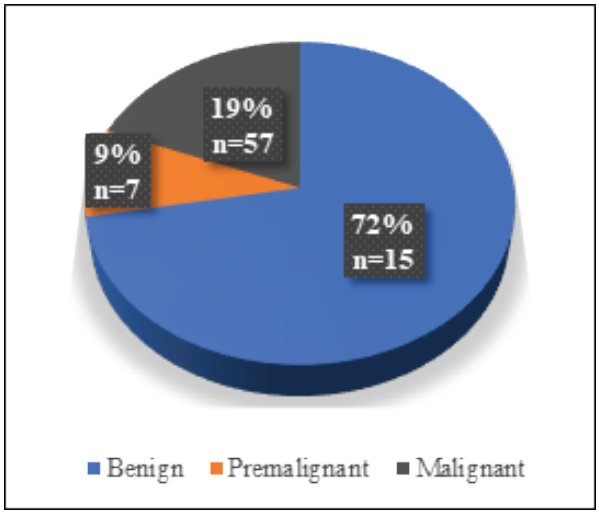

Fig 1. Distribution of the patients according to the nature of the cytological diagnosis (n =79)

Fibroadenoma was the most common lesion (24.1%) followed by carcinoma of the breast (19%) identified in this study **(Table 4)**.

Table 4: Distribution of the patients according to cytological diagnosis (n = 79)

Clinical diagnosis	Frequency	Percentage
Fibroadenoma	19	24.1%
Carcinoma of breast	15	19.0%
Fibrocystic disease	12	15.2%
Atypical ductal hyperplasia	7	8.9%
Inflammatory lesion	7	8.9%
Benign breast disease	4	5.1%
Granulomatous mastitis	4	5.1%
Proliferative breast disease	4	5.1%
Galactocele	3	3.8%
Lactational adenoma	2	2.5%
Fat necrosis	1	1.3%
Fibroadenoma with cystic changes	1	1.3%

The study showed that the majority of the patients with breast lumps who presented below 40 years of age had benign lesions **(Table 5)**.

Table 5: Distribution of the patients according to the age group correlated with the cytological diagnosis (n=79)

Age group	Cytology		
	Benign	Premalignant	Malignant
<20 years	4	0	0
20-<30 years	24	0	0
30-<40 years	17	3	1
40-<50 years	10	3	7
>50 years	2	1	7

Most of the malignant cases were found over 40 years of age **(Figure 2)**. No malignancy was detected below 30 years of age that was significant statistically (Cramer's V= 0.480; p = 0.000).

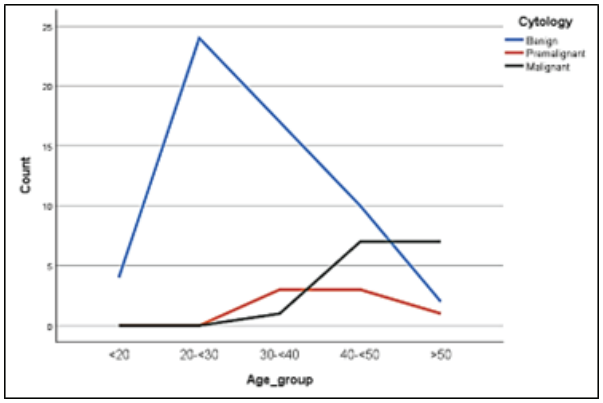

Fig 2. Distribution of the patients according to the age group correlated with the cytological diagnosis (n=79)

In this study, the benign lesions were found distributed almost equally on one side, i.e., 45.6% on the right & 49.1% on the left side **(Figure 3),** whereas most of the malignant cases (73.3%) were diagnosed on the right side even though it was not significant statistically (Cramer's V= 0.194; p = 0.203).

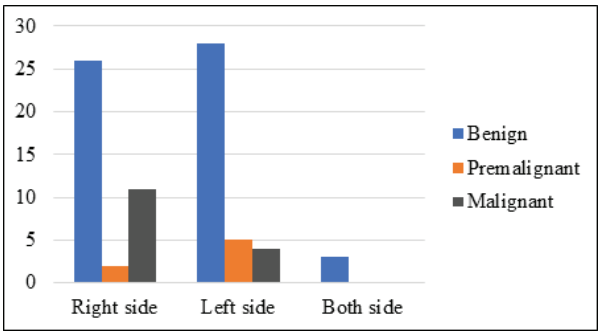

Fig 3. Distribution of the patients according to the site of involvement correlated with the cytological diagnosis (n=79)

Results

Fine-needle aspiration cytology is frequently used in the diagnosis of breast cancer because it is an excellent, safe, and cost-effective diagnostic procedure. Using inexpensive equipment and a straightforward technique, one can obtain on-site immediate reports for a low cost. The FNAC's high degree of accuracy, quick turnaround times, and less invasive process compared to a tissue biopsy are its most important benefits. Less open breast biopsies can be performed after the FNAC of the breast (7, 8, 9, 10).

In the current study, most of the patients were between 20 to 30 years of age with a mean (±SD) age of 34.73 ± 10.55 years. Parappurath et al. reported that the mean age of the patients was 35.6 years. Nkonge et al. showed that the mean age of the evaluated patients was 36.0±16.7 years (1). Koorapati R et al. reported the age range from 11 years to more than 50 years (9). These age differences may be due to different places of study.

In the present study, 49.4% of cases had right breast lesions, 46.8% cases had left breast lesions and both breasts were affected in 3 (3.8%) cases. Chalya et al. also reported right breast involvement in 53.8% of cases, left breast involvement in 42.8%, and bilateral breast lesions in 3.4% of patients which is similar to our findings (10). Sangma et al reported right and left breast involvement by benign disease in 48% and 40% of cases respectively. Bilateral involvement was seen in 12% of cases.

In our study, most of the cases (41.8%) presented with breast lumps that were mobile and painless. Parappurath M et al. also reported most of the cases (39.4%) presented with breast lumps that were painless which is similar to our results (1). Koorpati R et al. found that 68% of breast lumps were mobile and painless, and 24% were associated with pain (9). In the study by Illaiah et al., the most common presentation was the painless lump (58.3%) followed by painful lumps (7).

The cytological analysis in this study showed that 72.2% of cases were benign and 19.0% were malignant lesions. Moreover, the premalignant conditions (atypical ductal hyperplasia) of 8.9% were also considered as a different entity in this study. Mendoza et al. also found a 5% case of atypical ductal hyperplasia in their study (8). Nkonge et al. reported 72.3% benign and 27.7% malignant lesions in their study (6).

In our study, fibroadenoma was the most frequent (24.1%) diagnosis of breast lumps identified by FNAC. Bhargava GS et al. showed fibroadenoma was the most common benign lesion seen in 50% of the total patients (11). Koorapati R et al. mentioned fibroadenoma is the commonest one among benign breast lesions in their study (9).

This study revealed that the majority of the patients with breast lumps who presented below 40 years of age had benign lesions. This might be helpful in an early assumption of the category of breast lumps at an early age. According to our findings, most of the malignant cases were found over 40 years of age. No malignancy was

detected below 30 years of age which was significant statistically that implies that there might be less chance of occurring carcinoma of the breast below the age of 30 years. Yalavarthi et al. also reported the maximum occurrences of benign lesions in the "third decade" and of malignant lesions in the "fifth decade" (2).

In our study, about 45.6% of benign cases were found on the right side and 49.1% on the left. Sangma et al. reported right and left breast involvement by benign disease in 48% and 40% of cases respectively which is in line with our findings (12). Our finding of 73.3% of malignant cases on the right side was not significant statistically. These data imply that the benign or malignant cases may have no laterality issues.

The commonest case among the study population was fibroadenoma 19 (24.1%). The next common was carcinoma of the breast (13), followed by fibrocystic changes (9). There were 7 cases of ADH & Inflammatory lesions. The study also showed 4 cases of benign breast diseases, granulomatous mastitis & proliferative breast disease. There were 3 cases of galactocele, 2 cases of lactational adenoma, 1 case of fat necrosis & FA with cystic changes.

In our study, there were 11 (20%) cases of benign inflammatory lesions, and the majority of these were acute and chronic mastitis. Granulomatous mastitis is a rare chronic inflammatory breast lesion that mimics carcinoma clinically and radiologically (4).

In our experience, FNAC results are reliable regarding malignant lesions; however, the category of "Suspicious for Malignant lesions" or premalignant lesions need histopathological evaluation before performing surgical measures.

Results

According to the study, neoplastic and non-neoplastic breast lesions may be accurately diagnosed in the outpatient setting using fine needle aspiration cytology. Young people seem to get fibroadenoma the most frequently. After age 40, the malignant lesion becomes more prevalent. The patient's comfort, the lack of a need for anesthesia, the speed of the analysis, and the lack of false positive results make the FNAC the first diagnostic tool in the management of breast lesions before surgery.
In light of this, pathologists and surgeons should keep using the method for the early diagnosis of breast cancer. Additionally, the patient's wait time for an excision or incision biopsy will be drastically shortened.

Source(s) of Support: Nil

Conflict of Interest: Nil

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ORIGINAL ARTICLE

JOURNAL OF AD-DIN AKIJ MEDICAL COLLEGE

Vol. 1 ▮ No. 1 ▮ July 2022
JAAMC 2022; 1(1): 19−22

Gross morphological study on the extension of mesoappendix of the vermiform appendix in Bangladeshi people

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Received: 17 Feb 2022
Accepted: 13 Mar 2022

Abstract

Background: *The vermiform appendix is a narrow worm-like structure extending from the posteromedial wall of the cecum, having no known significant digestive role in humans. It is connected to the lower part of the ileal mesentery by a triangular fold of the peritoneum called mesoappendix, which carries vessels and nerves to and from the appendix. Mesoappendix usually extends almost to the tip of the appendix. Failure of the mesoappendix to reach the tip reduces the blood supply of the tip of the organ, which makes it more liable to become gangrenous and hence early perforation during inflammation.* ***Objectives:*** *The study was done to determine the extent of the mesoappendix of the vermiform appendix in Bangladeshi people to magnify the knowledge regarding the vermiform appendix in our population.* ***Materials and Methods:*** *The study was conducted in the Department of Anatomy, Sir Salimullah Medical College, Dhaka, from January 2008 to June 2009 on 60 (sixty) postmortem (cadaveric) vermiform appendices of Bangladeshi people of different ages and sexes. The collected samples were divided into five groups; group A (0 to 20 years), group B (21 to 30 years), group C (31 to 40 years), group D (41 to 50 years), and group E (>50 years). The extent of the mesoappendix of the vermiform appendix was determined by simple observation. Then statistical analysis was done by Z test of proportion using SPSS software.* ***Results:*** *In the present study, the percentage of mesoappendix extending up to the tip was 66.67%, percentage of mesoappendix extending not up to the tip was 33.33%. It was statistically significant (P,0.05).* ***Conclusion:*** *This study provides certain basic information on the extent of the mesoappendix of the vermiform appendix of Bangladeshi people, which is responsible for the vascularisation of the organ and its severity during inflammation.*

Keywords: *Mesoappendix, vermiform appendix, Bangladeshi people*

Introduction

The vermiform appendix is a narrow, worm-like, blind-ended, tubular structure projecting from the posteromedial wall of the cecum, having no known major digestive role in humans. It is connected to the lower part of the ileal mesentery by a triangular double-layered fold of peritoneum called mesoappendix which carries vessels and nerves to and from the appendix. Usually, the mesoappendix reaches the tip of the vermiform appendix but sometimes fails to reach the distal third (1). Failure of the mesoappendix to reach the tip probably reduces the blood supply of the tip of the organ, making it more liable to become gangrenous and hence early perforation during inflammation (2, 3).

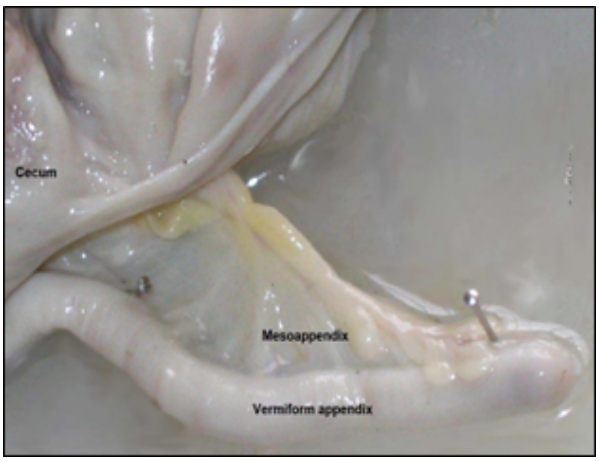

Fig 1. Anterior view of the vermiform appendix along with cecum and mesoappendix.

Materials and Methods

The present study was a descriptive cross-sectional type of study with some analytical component, performed between January 2008 to June 2009 on 60 (sixty) postmortem (cadaveric) vermiform appendices of Bangladeshi people of different ages and sexes. For the convenience of study, the collected samples were divided into five groups; Group-A (0-20 years), Group B (21-30 years), Group C (31-40 years), Group D (41-50 years) and Group-E (>50 years) (Table 1) (4). Samples of cadaveric vermiform appendices with surrounding structures were collected within 12 to 36 hours of death from unclaimed human dead bodies that showed no sign of putrefaction and that were autopsied on different dates in the morgues of the Departments of Forensic Medicine of Dhaka Medical College (DMC) and Sir Salimullah Medical College (SSMC), Dhaka. In each case, the abdomen was opened by a long midline incision and the flaps were reflected to give a good view of the abdominal cavity along with its contents. Then the tenia coli of the cecum was identified. The three tenia coli of the ascending colon and cecum converge at the base of the appendix and become its longitudinal muscle coat. The anterior cecal tenia coli act as the best guide for the vermiform appendix. This knowledge was used to identify the appendix. The position of the appendix was noted. The cecum and the proximal part of the ascending colon were mobilized by blunt dissection, using gloved fingers and the handle of a BP knife. About 10 cm from the cecum, the ascending colon was divided by a sharp knife between two ligatures to prevent soiling of the dissection. The distal 10 cm of the ileum was similarly divided between two ligatures. Then with a pair of scissors, the mesentery was cut radially as far away as feasible from the intestinal border. The mesoappendix was kept intact and separated from its root. The specimen was then taken to the basin, the ligatures were removed and the contents of the bowel were emptied (5). The specimen was washed thoroughly with running tap water. Blood and blood clots were removed as far as possible. A tag was attached to a specimen that contained the identification number and age of the cadaver. Then the specimen was mopped with blotting paper. Immediately after this, the length of the appendix was measured, and then

the specimen was fixed and preserved in a 10% formol saline solution. Each 10% formol saline-fixed specimen was initially washed with running tap water to remove the formol saline to avoid irritation to the eyes and nasal mucosa by the formol saline vapor and also to allow softening of the fixed and hardened issue. The samples were taken in a metallic tray, and the surrounding fat and other unwanted tissues were removed carefully with the help of sharp scissors, fine dissecting forceps, and a BP blade to expose the vermiform appendix and its related structures. Whether the mesoappendix extended up to the tip or ended near the tip was observed by naked eye examination. Statistical analysis was done by Z test of proportion using SPSS software.

Results

Most of the appendices studied in this study were in the age group of 21-30 years according to Warwick Glover**(4) (Table 1).**

Table 1: Age grouping of the vermiform appendices (following Glover 1988)(4)

Groups	Age in years	No. of samples (n=60)	Percentage frequency
A	0-20	9	15
B	21-30	19	31.67
C	31-40	12	20
D	41-50	14	23.33
E	>50	6	10

The study revealed that in 1/3rd of cases, the mesoappendix reached up to the tip of the appendix which was significant statistically (P<0.05).

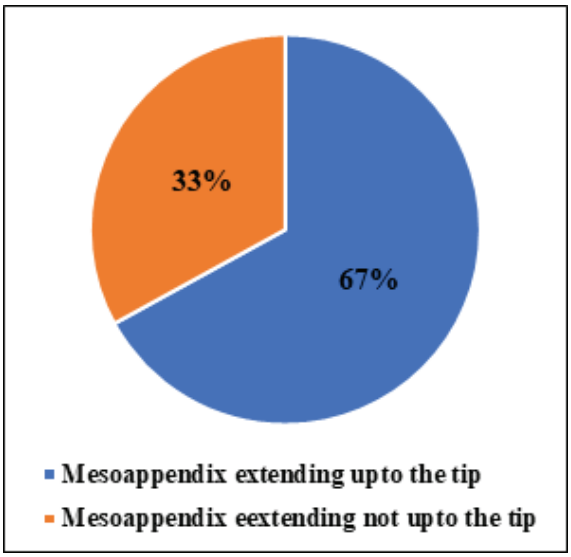

Fig 2. Extension of mesoappendix in total study samples (n=60)

Discussion

The appendix is supplied by a small artery, the appendicular artery, that passes through the mesoappendix. Failure of mesoappendix to reach the tip of the appendix reduces vascularity of the tip of the organ, making it more liable to become gangrenous and hence early perforation during inflammation (2). This study aimed to get an in-depth insight into the attachment of mesoappendix.

In the present study, the percentage of mesoappendix extending up to the tip was 66.67%. The result of the present study matched with that of Paul (2007) (5) as both of the studies were carried out on samples of the same source. On reviewing the literature, the study done by Swathipriyadarshini (5) et al in 2022 had the nearest incidence of 76.6%. According to the study by Geethanjali (6) in 2011 had an incidence of 69.23%, by Anderson et.al (7)., the mesoappendix reached the tip of the appendix in 80% of the cases. According to Tahir Iqbal (8) in 2012, there was a long mesoappendix frequently extending up to the tip of the appen-

dix and often an ileo-caecal fold. Bakheit and Warille (1997) (9) studied postoperative resected vermiform appendix of Sudanese citizens in Khartoum province in Omdurman and Khartoum Teaching Hospitals from November 1995 to February 1996. They noted that the mesoappendix failed to reach the tip of the appendix in 46.7% of the patients. Golalipour et al (1999) (10) studied 117 postoperative vermiform appendices to determine the anatomical variations of the position, length, and mesoappendix from September 1998 to March 1999, in South-East of Caspian Sea in the North of Iran. They observed that the mesoappendix failed to reach the tip of the appendix in 65.8% of the patient and extended up to the tip in the case of 34.2% of the patients. The results of the present study did not match with those of Bakheit and Warille (1997) and Golalipour et al (1999) (6) as they studied postoperative resected samples.

Conclusion

On the background of the availability of the data, regarding gross morphological study on human vermiform appendix supplied by various standard textbooks and journals, it is found that very few research works have been performed on Bangladeshi people. The observations and results of the present study are expected to provide an idea about the gross morphological features of the vermiform appendix of Bangladeshi people and these findings will standardize the various measurements obtained by other observers in this country. The sample size was small but if the sample size was large, then the results might be more specific.

Source(s) of Support: Nil
Conflict of Interest: Nil

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ORIGINAL ARTICLE

JOURNAL OF AD-DIN AKIJ MEDICAL COLLEGE

Vol. 1 | No. 1 | July 2022
JAAMC 2022; 1(1): 23−28

Depression level among people with Diabetes Mellitus

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Received: 19 Feb 2022
Accepted: 14 Mar 2022

Abstract

Background: *Diabetes Mellitus is a chronic metabolic disorder. Depression is a common mental disorder characterized by sadness, loss of interest or pleasure, guilt or low self-worth, disturbed sleep, poor appetite, tiredness, and poor concentration. Around 350 million people are affected by depression in the world.* ***Objectives:*** *The study aims to explore the socio-demographic characteristics of diabetes patients and the level of depression among people with diabetes mellitus.* ***Materials and Methods:*** *The study was a cross-sectional study. One hundred three samples were taken. The Patient Health Questionnaire Nine (PHQ-9) questionnaire assessed depression levels.* ***Results:*** *The mean age of the participants was 49 years. In this study, it was found that out of 103 participants, 54% of respondents were male, and the rests of 46% were female. The research revealed that most of the participants suffered from mild depression 37.9% (n=39), tone to minimal depression 34.0% (n=35), average 19.4% (n= 20), moderately severe 7.8% (n=8), and the rest of the people suffer severe depression 1% (n=1).* ***Conclusion:*** *Diabetes Mellitus is one of our society's most common and worsening disorders. In our country prevalence of diabetes mellitus is increasing day by day. Every person with diabetes mellitus feels depressed about their disease. On the other hand, depression is the most common barrier to maintaining quality of life. We have to give them mental support, psychological assessment, and physical treatment.*

Keywords: *Diabetes Mellitus, depression, patient health questionnaire Nine (PHQ-9)*

Introduction

Diabetes Mellitus is a chronic metabolic disorder (1). The main cause of type-1 is a failure of the pancreas to produce enough insulin and type-2 inability of the body to utilize the produced insulin (2). Diabetes Mellitus is a metabolic disturbance of carbohydrate, protein, and fat metabolism (1). The prevalence of diabetes mellitus is rapidly increasing day by day. According to the world health organization, around 170 million people are affected by diabetes, which may double by 2030 (1, 3). According to the world health organization (WHO), Depression is a common mental disorder characterized by sadness, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or poor appetite, tiredness, and poor concentration. Depression is the most common mental disorder and around 350 million people are affected by depression in the world (4). Depression is characterized by sadness, loss of interest, low self-esteem, decreased sleep quality, loss of appetite, feelings of tiredness, and impaired concentration. Anxiety is a feeling of worry, and nervousness and stress are mental strains due to excessive demands on the body (5). The Relationship between Diabetes Mellitus and depression has been investigated by many researchers. Prevalence of depression among individuals with Diabetes Mellitus appears to vary by type of Diabetes Mellitus, race/ethnicity, and among developed and developing nations (6, 7).

Materials and Methods

Study design

This study was conducted using cross sectional survey under a quantitative study design. Survey methodology was chosen to meet the study aim as an effective way to collect data.

Selection of sample

Peoples with Diabetes Mellitus has collected using convenience sampling from the different government and non-government hospital also diagnostic based clinic setting in Bangladesh.

Study period

The study period was from March 2019 to August 2019.

Sample size

From this population the researcher selected 103 subjects for study according to the inclusion and exclusion criteria. According to the prevalence of depression on patients Diabetes Mellitus, estimated sample size 115 (by following(z^(2) pq)/d^2 , where z= 1.28 with 80% confidence limit, p= 0.87, q= 1-p, d=0.04) (8).

Sampling techniques

The study was conducted by using the convenience sampling methods due to the time limitation and as it was the one of the easiest, cheapest and quicker method of sample selection. The researcher used this procedure, because, getting of those samples whose criteria were concerned with the study purpose.

Inclusion criteria

- Patient with Diabetes mellitus (Type-1 & Type-2)
- Age group (20 years to 90 years).
- Both male and female patient were included.
- Patient who were willingly to participate

Data collection tools

Two questionnaires were used to data collection process. Semi structured questionnaire was used for the collection of socio-demographic

information as well as information diabetes related variables.

Kroenke, et al., established Patient Health Questionnaire Nine (PHQ-9) is used to measurement of level of depression. In this scale there are some interpretations. There are: 0-4= none-minimal; 4-9= mild; 10-14= moderate; 15-19= moderately severe and 20-27 is severe depressive symptom (9).

Process of Data Collection

At the beginning of data collection researcher clarified that, the participant has the right to refuse to answer of any question during completing questionnaire. Researcher also clarified to all participants about the aim of the study. Participants were ensured that any personal information would not be published anywhere. Researcher took permission from each volunteer participant by using a written consent form. After getting consent from the participants, standard questionnaire was used to identify complains and collect demographic information. Questions were asked according to the Bangla format. For conducting the interview, the researcher conducted a face to face interview and asked questions. The researcher built a rapport and clarified questions during the interview. All the data were collected by the researcher own to avoid the errors.

Data analysis

Descriptive statistics were used to analyze data. Data were analyzed with the software named Statistical Package for the Social Science (SPSS) version 20.0. Data were analyzed by descriptive statistics and calculated as percentages and presented by using table, bar graph, pie charts etc. Microsoft office Excel 2010 was used to decorating the bar graph and pie charts.

Results

Results related to the socio-demographic status

The study revealed that, the mean age of the participants was 49 ± 16.04 years. The minimal age was 23 years and maximum was 86 years. Out of 103 participants 54% respondents were male and were 46% female. Most of the participants were primary passed (24.3%) whereas 14.6% participants were post graduated. Meanwhile 4.9% participants were illiterate also. The education status of the other participants is shown in **Figure 1**.

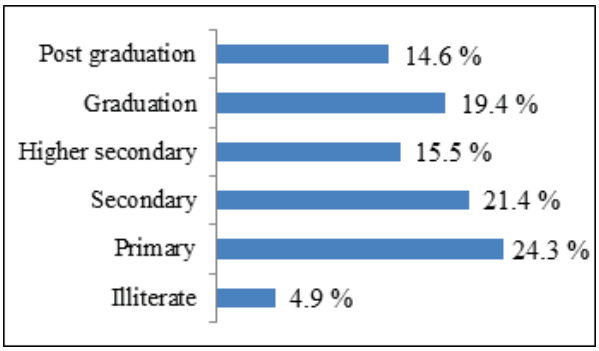

Fig 1. Educational status of the participants

Majority of the participants were found as sedentary to moderate worker. The professional status is shown in Table 1.

Table 1: Professional status of the participants

Professional Status	Frequency n (%)
Housewife	36 (35.0%)
Service Holder	22 (21.4%)
Businessman	16 (15.5%)
Retired	17 (16.5%)
Student	3 (2.9%)
Others	9 (8.7%)

Results related to the general aspects of diabetes mellitus

In this research, majority of participants were found suffering from diabetes mellitus for less than 5 years (37.9%) whereas only

(11.7%) were found suffering for more than 21 years **(Figure 2).**

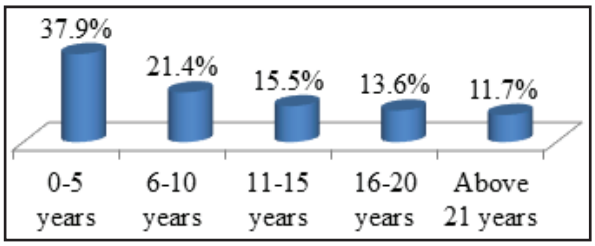

Fig 2. Duration of the Diabetes mellitus among the participants

The Research showed that, most of the participants were suffering from Type-I Diabetes Mellitus (56.3%) and rest of participants were suffering from Type-II Diabetes mellitus (43.7%)

The Research revealed that, majority of the participants (50.6%) were suffering from post-diabetic complications, among which, retinopathy was highest (42.30%). The frequencies of the other complications are shown in **(Figure 3).**

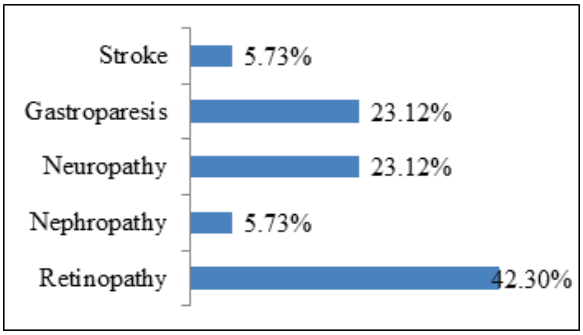

Fig 3. Complication of diabetes mellitus among the participants

Results related to the depression level

The PHQ-9 scale used to score the depression status of the participants, had nine (9) items. The scores for each item were summed to generate a total score 27 (range: 0-27). The score was interpreted as the none-minimal (0-4), mild (5-9), moderate (10-14), moderately severe (15-19), Severe (20-27). In the current research, it was found that, most of the participants were suffering from mild depression (37.9%) whereas only (1%) was suffering for severe depression. Other levels are shown in **(Figure 4)**.

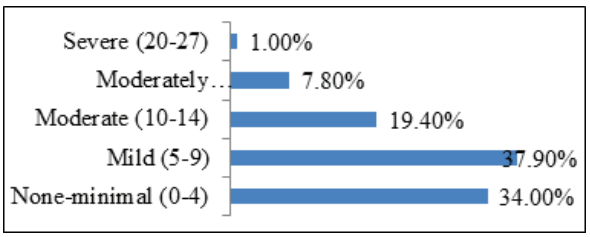

Fig 4. Depression level among people with diabetes mellitus

Discussion

This study was planned to see depression level among peoples with Diabetes level. The mean age of the participant was 49 years. 23 years minimal age and maximum was 86 years.

In this study researcher found the out of 103 participants 54% (n=56) respondents were male and rests of 46% (n=47) were female. Another study also reported that, males (46%) and females (54%) (2).

Aminu et al. also showed that, Educational status was Illiterate 11.0%, Primary school 33.5%, Secondary school 30.5%, College and above 25.0% (2). In this study, researcher showed that highest rate that was primary 24.3% (n= 25), Secondary passed participant were second highest rate that was 21.4% (n=22). Bachelor passed, higher secondary, post-graduation and illiterate participants were according to 19.40% (n=20), 15.5% (n=16), 14.6 % (n=15) and 4.9% (n=5). Professional was 6.5%, skilled was 17.5%, Unskilled 6.5%, homemaker 44.0%, Retired 24.5%, Unemployed 1.0% (2). In this study researcher also

found that, majority of the participant are housewife 35% (n=36), than service holder 21.4% (n=22), Retired 16.5 (n=17), Businessman 15.5% (n=16), others professionals 8.7% (n=9) and student was 2.9% (n=3).

Researcher also found, most of participants are suffered from diabetes mellitus for 0-5 years 37.9% (n=39), there after 6-10 years 21.4 (n=22), 11-15 years 15.5% (n=16), 16-20 years 13.6% (n=14) and suffered from diabetes mellitus for above 21 years 11.7% (n=12).

Add to this, majority of the participant suffered Type-I diabetes mellitus 56.3% (n=58) and rest of participant suffered Type-II diabetes mellitus 43.7% (n=45). Another study also reported that, Type-I diabetes mellitus 32.8% and Type-II diabetes mellitus 67.2% (10).

Researcher showed that, 50.6% (n=52) people with diabetes mellitus suffer post diabetes complication. Among them, retinopathy 42.30% (n=22) is highest rate, after than neuropathy and gastroparesis was same as 223.12% (n=12), nephropathy and stroke 5.73% (n=3). Another study also reported that, people with diabetes mellitus suffer retinopathy 25.7%, Nephropathy 7.1%, Peripheral neuropathy 46.5%, Autonomic neuropathy 14.2%, Impotence 17.5 %, Peripheral vascular 28.5%, Coronary artery 18.6% (11).

Aminu et al., showed that in their study, majority of participant (56%) suffer mild depression, than moderate (32%), and rest of (12%) participant suffer from severe depression (2). In this research, researcher found that, most of the participants suffer mild depression 37.9% (n=39), than none to minimal depression 34.0% (n = 35), moderate 19.4% (n = 20), moderately severe 7.8% (n = 8), and rest of people suffer severe depression 1% (n = 1).

Conclusion

In conclusion, researcher was worked with 103 peoples with Diabetes mellitus, and found many objectives and depression level. Diabetes Mellitus is one of the most common and worsen disorder at our society. In our country prevalence of diabetes mellitus is increasing day by day. Among them maximum persons felling depression about their diabetes mellitus. On the other hand, depression is a most common barrier to maintain quality of life. In this study, most of the participants suffer mild depression 37.9% (n=39), none to minimal depression 34.0% (n=35), moderate 19.4% (n= 20), moderately severe 7.8% (n=8), and rest of people suffer severe depression 1% (n=1). A diabetes patient suffers from depression at any time during his diabetes life. All of our society should humanly support diabetes patients to improve the mental health of a diabetes patient.

Source(s) of Support: Nil
Conflict of Interest: Nil

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ORIGINAL ARTICLE

JOURNAL OF AD-DIN AKIJ MEDICAL COLLEGE

Vol. 1 ▮ No. 1 ▮ July 2022
JAAMC 2022; 1(1): 29–33

Study of benign vocal cord lesions causing hoarseness

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Received: 20 Feb 2022
Accepted: 14 Mar 2022

Abstract

Background: *Voice is the leading way of communication among human beings. Causes of hoarseness of voice may be localised vocal cord pathology, e.g. vocal fold nodule, vocal fold polyps, vocal fold cyst, laryngeal papillomatosis, acute or chronic laryngitis, vocal cord palsy, laryngeal tumor, non-specific voice disorders, functional dysphonia. Neurological impairment of the vocal cord or larynx may result in hoarseness.* ***Objectives:*** *This study aims to see the relationship between age, sex, profession, and socioeconomic status intake with hoarseness of voice.* ***Materials and Methods:*** *100 patients were studied in 06 months from 1st July 2014 to 31st December 2014 in the Department of ENT & Head-Neck Surgery, Uttara Adhunik Medical College Hospital, Dhaka. The detected cases of hoarseness of voice patients were nominated according to the eligibility standards by purposive sampling. Statistical analysis was done by SPSS version 21.* ***Results:*** *Maximum number of benign lesions causing hoarseness of voice were vocal fold nodules (49%), then vocal fold polyps (32%), followed by vocal fold cysts (13%) and vocal cord granuloma (3%). Males were affected more than females (1.94:1). Most patients were in the age group of 21 to 40 years. Peak frequency was the age group of 30-40 years. Service holders formed the predominant group. The majority of cases were from middle socioeconomic conditions. Smoking and tobacco were related to 41% of cases.* ***Conclusion:*** *Hoarseness is just an indicator with a very distinct aetiology. The aetiology varies in different geographical places, so each case should be sensibly and meticulously evaluated to know the diagnosis and causal pathology for early and timely management.*

Keywords: *Hoarseness, benign vocal cord lesions, tobacco intake complications*

Introduction

Voice is the primary way of communication among human beings. The vibration of the vocal cords of the larynx forms the glottal sound. The rest of the vocal tract modifies this essential vibratory sound to produce an identifiable voice quality (1). Hoarseness is the voice's perceived rough, harsh, or breathy quality (2). Hoarseness may result from any deviation of the vocal cord structure, function, or both.

Causes of hoarseness of voice may be localised vocal cord pathology, e.g. vocal fold nodule, vocal fold polyps, vocal fold cyst, laryngeal papillomatosis, acute or chronic laryngitis, vocal cord palsy, laryngeal tumor, non-specific voice disorders, functional dysphonia (3). Neurological impairment of the vocal cord or larynx may result in hoarseness. The most important one is vocal cord palsy resulting from recurrent laryngeal nerve palsy. Left vocal cord palsy is the most common due to the long intra-thoracic course of the left recurrent laryngeal nerve. Psychological factors may be a predisposing, precipitating agent in cases of voice changes. A hysteric conversion reaction may initiate a sudden loss of voice (4).

Women are more prone to develop functional voice changes because of exposures such as worry, anxiety, and depression. Congenital anomalies in the form of the laryngeal web may give rise to hoarseness in infants and newborns. This condition may result from failure of complete canalisation of the larynx during embryogenesis (5). More than 50% of patients with voice complaints have a benign disorder. The most common benign lesions of the vocal cord are vocal cord nodules, vocal cord polyps, papillomas, Reinke's oedema, and vocal cord cyst. Reinke's oedema is a term used to describe the vocal folds when they become chronically and irreversibly swollen. It occurs almost exclusively in moderate to heavy smokers (2). Granulomas are benign inflammatory lesions. Men tend to develop granulomas secondary to hyperfunction, while women develop them more commonly due to intubation.

Materials and Methods

This is a descriptive type of cross-sectional study that was conducted in the Department of ENT and Head Neck Surgery, Uttara Adhunik Medical College Hospital (IRB no. UAMC/ERC/Rec-28/2014), Dhaka with a sample size of 100 which was taken purposively from 1st July 2014 to 31st December 2014. All patients were clinically diagnosed as benign vocal cord lesions causing hoarseness of voice by Fiber optic laryngoscopy and Direct Laryngoscopy. Patients were randomly registered, matching the inclusion and exclusion criteria.

Inclusion criteria:

Patients of all ages and sex groups with hoarseness of voice.

Exclusion criteria:

1. History and examination reveal malignant, psychological, traumatic, and other causes of voice change except for benign lesions.
2. Patients who refuse to be included in the study.

Results

Most hoarseness patients were in the 31-40 years and 21-30 years age groups (39% and 26%, respectively) shown in **Table 1.** Regarding sex, male patients were more (66%) than female (34%) shown in **Figure 1.** Most respondents (81%) were found in the Non-vocal nonprofessional group **(Table 2).** Regarding the causes of hoarseness, we discovered that vocal cord nodule (49%) was the highest number, followed by vocal cord polyp (33%) and vocal cord cyst (13%), which are shown in **Table 3.**

Table 1: Age distribution of the study population with hoarseness of voice (n=100)

Age group (Years)	Study patients	Percentage (%)
0-10	1	1 %
11-20	3	3 %
21-30	26	26 %
31-40	39	39 %
41-50	23	23 %
51-60	5	5 %
>60	3	3 %
Total	100	100 %

Most of the patients were in the age group of 31-40 years.

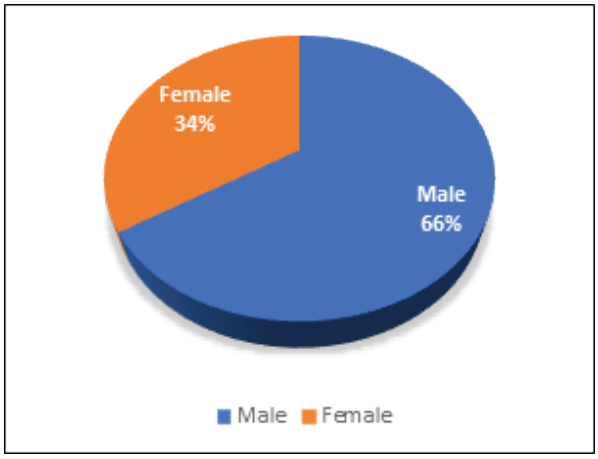

Fig 1. Sex distribution of the study population with hoarseness of voice

Table 2: Profession/ Nature of work causing hoarseness according to Koufman and Isaacson classification in study population (n=100)

Koufman classification level	**Occupation/ Nature of work**	**Study patient no.**	**Percentage (%)**
Level I Elite vocal performer	Singer	2	2
Level II Professional voice users	Teacher Political leader Imam Telephone operator	5	5
Level III Non-vocal professional	Students Service holder	12	12
Level IV Non-vocal non-professional	Housewife Businessman Labourers Bus helper Others	81	81
	Total	**100**	**100%**

Table 3: The distribution of causes of hoarseness in the study population (n=100)

Cause of hoarseness	**No of patients**	**Percentage (%)**
Vocal cord nodule	49	49 %
Vocal cord polyp	33	33 %
Vocal cord cyst	13	13 %
Vocal cord granuloma	03	3 %
Reinke's oedema	01	1 %
Recurrent laryngeal papillomatosis	01	1 %
Total	100	100 %

Discussion

A total of 100 patients were involved in this study. The majority were seen in the 31-40 (39 %). Chinthapeta K K (6) found that the majority of patients (34%) were in the age group of 31 to 40 years. Reddy D (7) found the most prominent group comprising 32% in the 31 to 40 age group. Muniraju M (8) found 44.44% of patients in the 31-40 years age group. My study result is similar to the effects of all these studies.

In my study, male patients were 66 (66%) and female patients 34 (34%), with male numerousness and a male-female ratio of 1.94:1. This matches with a study by Chinthapeta K K (6); Reddy D S (7) Banjara H (9); Siddapur G K (10) and Nimish P (11). All these studies showed male predominance and a male-female ratio between 1.88:1 to 2.12:1.
In this study, according to Koufman and Isaacson's classification (12), we uncovered 2% elite vocal performers, 5% professional voice users, 12% non-vocal professionals, and 81% non-vocal non-professionals. Banjara found 1.59% elite performers, 3.59% experienced voice users, 9.56% non-vocal professionals, and 85.26% non-vocal non-professionals. So, our study almost correlates with the study of Banjara H (9).

In this study, vocal cord nodule (49%) was found as the most common aetiology of hoarseness of voice. Other causes were vocal cord polyp (32%), vocal cord cyst (13%), followed by vocal cord granuloma (3%), Reinke's oedema (1%), and vocal cord papilloma (1%). This study result fluctuates from the survey of Chinthapeta K K (6), Reddy DS (7), Muniraju. M (8); Siddapur GK (10) and Shinde KJ (13) with vocal cord nodules as a cause of hoarseness of voice in 36%, 41%, 35.1%, 24%, and 42.85%, respectively.

Vocal cord polyp was one of the crucial causes of change of voice (32%). Our study differs from Chinthapeta K K (7) with 27% of cases, Reddy D S (8) with 48% of patients with vocal cord polyp but almost correlates with Shinde K J et al. (28.57%) (6).

Vocal cord cysts were found in 13% of cases. Chinthapeta K K (6) found a vocal cyst in 15% of patients and Siddapur G K (10) found it in 15.8% of cases. So, our study almost correlates with these studies.

Vocal fold granuloma was found in 3% of cases. This result varies with the study of Shinde K J (13), with 21.48% cases.

Conclusion

A maximum number of cases of hoarseness of voice was due to vocal fold nodule (49%), following vocal fold polyp (32%), vocal fold cyst (13%), and vocal cord granuloma (3%). Males were involved more than females (1.94:1). Most cases were in the age group of 31 to 40 years. Non-vocal non-professionals created the pre-dominant group. The majority of patients were from the middle socioeconomic groups. Smoking and tobacco use were the communal predisposing factors.

Source(s) of Support: Nil
Conflict of Interest: Nil

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ORIGINAL ARTICLE

JOURNAL OF AD-DIN AKIJ MEDICAL COLLEGE

Vol. 1 ▮ No. 1 ▮ July 2022
JAAMC 2022; 1(1): 34–38

Quality of life for multi-drug resistant tuberculosis patients in Bangladesh

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Received: 22 Feb 2022
Accepted: 16 Mar 2022

Abstract

Background: *MDR-TB has risen as a significant public health problem due to the emergence of resistance to anti-tubercular therapy (ATT). If this communicable infectious disease is not controlled properly will affect the person's quality of life in all domains.* ***Objectives:*** *This study was conducted to determine MDR-TB patients' quality of life (QOL).* ***Materials and Methods:*** *This cross-sectional study was conducted among 104 MDR-TB with DM patients by purposive sampling from the National Institute of Diseases of the Chest and Hospital (NIDCH) Mohakhali, Dhaka, from 1st January to 31st December 2021. Data were collected through face-to-face interviews with the help of a semi-structured questionnaire made by the FACT-G version -4 scale.* ***Results:*** *The result showed that the quality of life of MDR-TB patients was 56.83, and out of four domains, physical wellbeing (p = 0.000), social/Familial wellbeing (p = 0.000), and functional wellbeing (p = 0.000) were statistically significant. There was no significant difference in the emotional well-being domain (p = 0.799. The majority, i.e. 52 % of MDR-TB patients, were in the age group 30-59 years. The mean (±SD) age for MDR-TB was 34.22 (±15.18) years. A linear association was present between the age of the patients and their quality of life. Both were negatively related when the age of the patients increased total quality of life was lower. (R2= .070). The relation was found statistically significant at 0.01 level (p=.007).* ***Conclusions:*** *MDR-TB patients had lower QOL despite the new treatment strategy and free medicine availability. This highly infectious disease negatively impacts the QOL of MDR-TB patients, particularly in the physical, social, and functional domains.*

Keywords: *Quality of life, MDR-TB*

Introduction

One of the significant public health problems, Tuberculosis, is also one of the world's deadliest infectious diseases. In 2019, an estimated 10.0 million people worldwide had TB and 0.5 million people with MDR-TB and TB. Southeast Asia accounts for 26% of TB cases worldwide. Multidrug-resistant tuberculosis (MDR-TB) is an infectious disease that spreads through nuclei. Multidrug-resistant tuberculosis is a type of tuberculosis that often develops in patients who do not adhere to or do not complete appropriate TB treatment (5). Most strains of Mycobacterium tuberculosis are susceptible to first-line antibiotics. Multidrug-resistant tuberculosis (MDR) is caused by strains resistant to rifampicin and isoniazid, the two leading anti-TB drugs. Patients with drug-sensitive TB require 6-8 months of treatment with less toxic drugs. According to the WHO World Tuberculosis Report (Bangladesh Scenario), in 2019 (1). approximately 357 out of a thousand people in Bangladesh had TB 5.9 out of a thousand had MDR-TB. Drug-resistant TB has been a threat to public health. In 2018, about half a million new cases of rifampicin-resistant TB were reported. Studies have shown that patients with drug-resistant TB face stigma and discrimination in their families, neighbors, and workplace (2). On top of that, they face dire medical costs, lost productive days, and are pushed further into poverty (3). When a woman becomes ill with tuberculosis, the family loses out on activities that the woman does regularly. In some societies, TB patients are considered disabled or unable to marry. The marital impact of a TB diagnosis is well known. It is tough to arrange the marriage of boys and, more commonly, girls with this disease. Often, knowledge of the diagnosis led to divorce or a second marriage. Such discrimination can lead to anxiety, depression, and reduced quality of life. A person diagnosed with MDR-TB has been treated with first-line drugs for 6-8 months, in addition to 2 years of MDR-TB treatment, leading to the worst economic consequences. - society. in patients with MDR-TB. Bangladesh is among the 30 countries hardest hit by MDR-TB (3). In Bangladesh, an estimated 1.6% of new TB patients and 63% of previously treated TB patients have MDR-TB (4). However, the rate of MDR-TB cases remains low due to the high overall burden. MDR cases are large (estimated at 1,900 for new patients and 2,300 for previously treated patients). Bangladesh is unique in that it has the highest population density in the world and is one of the countries hardest hit by tuberculosis. Therefore, the objective of this study was to assess the quality of life of patients with MDR-TB, to gain a deeper understanding of the effects of MDR-TB on different aspects of health.

Materials and Methods

This cross-sectional study was conducted from 1st January to 31st December 2020; purposively A total of 104 subjects both male and female were admitted to the National Institute of Disease of the Chest and Hospital (NIDCH), Mohakhali, Dhaka, to assess the quality of life of MDR-TB patients with diabetes mellitus. Data were collected by the researcher himself through face-to-face interviews with a pretested semi-structured questionnaire (5).

Ethical considerations:

After approval by the Institutional Review Board (IRB) NIPSOM, under the Bangabandhu Sheikh Mujib Medical University, Dhaka, Bangladesh, permission was taken from the director of NIDCH for data collection. The subjects who were willing to participate in this study were asked to sign a consent form. The subjects were assured that they had the right to refuse to participate in the study at any time.

The identities of the subjects were coded in order to keep confidentiality and anonymity.

Results

In Mohakhali, Dhaka's National Institute of Chest and Diseases Hospital (NIDCH), patients with MDR-TB are the subject of this cross-sectional study. The Statistical Package for Social Science (SPSS) version 26 was used to analyze the data, and tables and figures created with Microsoft Office 2010 were used to present the data in this section. The following sections were created by organizing all findings. The sociodemographic details of the respondents are displayed in Table 1. Here, the majority, or 81 (78%) MDR-TB patients, are between the ages of 30 and 59, and 17 (16%) are between the ages of 60 and 75. For MDR-TB, the mean (SD) age was 46.13 (11.18) years. There was another similar study with different findings which showed majority of patients were in the age group of 46-55 years. Another study was conducted in Iran where the Mean age for patients without DM was 55.28±12 years. These discrepancies could be due to variations in the study place. Among those with MDR-TB, 74 (71.2%) men had the disease. 30 (28.8%) of the patients with MDR-TB were women. The majority, or 102 patients with MDR-TB (98.1%), were married. Among MDR-TB patients, 78.8% lived in rural areas, 21.2% in urban areas, and 79 (76.0%) MDR-TB patients lived in semi-pacca houses. In the Pacca House, about 23 (22.1%) patients were housed. 53 (51.0%) MDR-TB patients were illiterate in terms of education. In the case of MDR-TB patients, 28 (16.9%) completed their secondary education while only 24 (23.1%) completed their primary education. Of these 38 (55.19%) were housewives. 18 people, or 39.1%, were employed privately. 56 (51.9%) patients with MDR-TB and had a monthly family income of between 3,000 and 10,000. The monthly family income of 36 (44.4%) MDR-TB patients ranged from 11,000 to 20,000 Tk.

Table 1: Socio-demographic characteristics of the respondents (n=104)

Age(in complete years)	Frequency	Frequency
18-29	43	41
30-59	54	52
6 0-75	7	7
Mean ±SD	34.22±13.18	
Sex		
Male	64	61
Female	40	39
Marital status		
Married	92	88
Unmarried	12	11
Type of residence		
Urban	26.9	26
Rural	73.1	70
House type		
Kacha	1	1.0
Semi-pacca	91	87.5
Pacca	12	11.5
Educational status		
Illiterate	39	37.5
Primary	27	26.0
Secondary	28	26.9
HSC	5	4.8
Graduate and above	5	4.8
Occupation		
Home maker	30	44.1
Business	23	57.5
Govt. Service	0	0.0
Private Service	28	0.9
Retired	3	17.6
Unemployed	10	58.8
Family monthly income		
3000-10000	56	51.9
11000-20000	36	44.4
21000-30000	9	64.3
31000-50000	3	60.0
Number of family members		
1-4	39	(65.0)
5-8	63	(45.0)
9-11	2	(25.0)

Table 2: Correlation among quality of life and selected attributes of MDR-TB patients (n=104)

Attributes	MDR-TB patients	
	r	p
Age	-.264	.007
Number of family members	-.095	.336
Family Monthly income	-.040	.690

In **Table 2,** the quality of life for MDR-TB patients was found to be negatively correlated with patient age, the number of family members, and monthly income. A significant age-quality correlation was discovered. (p=.007).

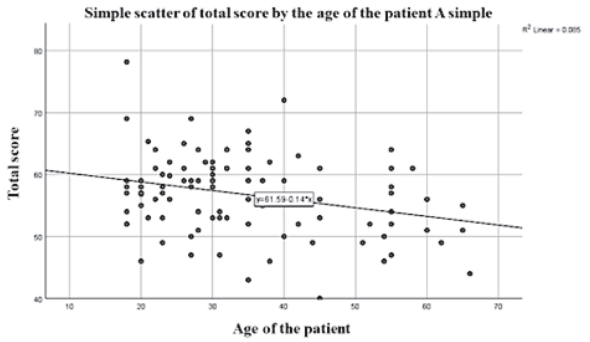

Fig 1. The scatter diagram demonstrates that there was a linear relationship between patient age and quality of life. When a patient's age increased, their overall quality of life decreased, and both were negatively correlated. (R2= .070). At the 0.01 level (p=.007), the relationship was found to be statistically significant.

Discussion

The majority of the 54 (52 %) MDR-TB patients in this study were in the 30- to 59-year-old age range. Another study was conducted in Iran where the Mean age for patients was 55.28±12 years. This discrepancy could be due to variations in the study place. It was observed that 56 (51.9%) of the 104 MDR-TB patients were in the income range of 3,000 to 10,000 (BDT). Another study of a similar nature was conducted in Bangladesh, where 34 (13.9%) participants had incomes under 5000 BDT (4). This was a result of the majority of NIDCH patients coming from middle- and low-income socioeconomic backgrounds. The majority, or 102 patients with MDR-TB (98.1%), were married. There was another study with similar findings which showed the majority i.e. 164 (61.6%) of TB patients were married. This may be due to cultural similarities in the study place (6).

A study conducted in India found that the majority patients of TB were 33 (12.4%) Among MDR-TB patients, 78.8% lived in rural areas, 21.2% in urban areas. There was quite a similar study with different findings in Iran where the majority of patients (92.2%) with TB lived in an urban area. This discrepancy could be due to variations in the study place. 79 (76.0%) MDR-TB patients lived in semi-pacca houses. In the Pacca House, about 23 (22.1%) patients were housed. 53 (51.0%) MDR-TB patients were illiterate in terms of education. This may be due to geographical similarities between the two countries both are situated in South East Asian Region (6).

In the case of MDR-TB patients, 28 (16.9%) completed their secondary education while only 24 (23.1%) completed their primary education. Of these 38 (55.19%) were housewives. 18 people, or 39.1%, were employed privately. 52 (48.1%) patients with MDR-TB The monthly family income of 45 (55.6%) MDR-TB patients ranged from 11,000 to 20,000 Tk (4).

The MDR-TB patients in this study had a mean physical well-being score of 17.44±.3.478 (p=.000). Statistics showed that this outcome was significant. In the group of MDR-TB patients, the mean score for social and familial well-being was 15.17±2.596 (p=.000). Statistics showed that this

outcome was significant. The study result showed there was no significant association between emotional well-being and socio-demographic variables.

Our study found that the group of MDR-TB patients had 14.06±3.841 emotional well-being scores (p=.799). This outcome lacked statistical significance. Another study conducted in India revealed that the average level of emotional functioning in MDR-TB patients was 19.03±26.509(6). The study's findings demonstrated that there was no meaningful relationship between sociodemographic factors and emotional well-being (7).

In this study, the mean functional well-being score for MDR-TB patients was 9.17± 2.948 (p=.000). Patients with MDR-TB had a mean quality of life of 56.83±6.281 (p=.000). A statistical test revealed this result to be significant. The results of the current study showed a negative relationship between the patient's age, the size of their family, their monthly family income, and their quality of life. The QoL was found to be lower as age increased.

Conclusion

The prevalence of double-burden diseases is currently on the rise in our nation, with MDR-TB being one of these problems. If, MDR-TB is not properly managed, it is an incurable illness that will lower a person's quality of life. The purpose of this study was to evaluate patients with MDR-TB in terms of their quality of life. MDR-TB patients' quality of life was impacted in all four areas, but functional domains were particularly hard hit. The study found that MDR-TB patients, particularly those who are young, have higher QOL when compared to people of other ages. Compared to patients who were not married, married MDR-TB patients had a higher quality of life. Patients from nuclear families and families with fewer than five members had higher quality of life than patients from joint families and also for number of family members.

Acknowledgment

The authors would like to express their gratitude to all of the respondents who took part in the study, as well as the panel of experts who evaluated the questionnaire and made changes based on their feedback.

Source(s) of Support: Nil

Conflict of Interest: Nil

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CASE REPORT

JOURNAL OF AD-DIN AKIJ MEDICAL COLLEGE

Vol. 1 ▮ No. 1 ▮ July 2022
JAAMC 2022; 1(1): 39−41

Cytological diagnosis of epidermal inclusion cyst of the breast: A rare benign entity

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Received: 23 Feb 2022
Accepted: 16 Mar 2022

Abstract

Epidermal inclusion cysts are benign, most commonly found in the head, neck, and trunk. EIC arising from the breast is an uncommon benign condition. We report one case of enlarging the EIC of the breast. The diagnosis of this condition may not be straightforward with imaging alone if an EIC presents as an enlarging lump in the breast and mimics a benign breast lesion, most commonly a fibroadenoma or malignant lesion with benign imaging features. Excision is usually recommended for a definite histopathological diagnosis and the prevention of potential risks of malignant transformation. Asymptomatic stable lesions do not require treatment; a biopsy is unnecessary.

Keywords: *Breast, cytology, epidermal inclusion cyst (EIC), FNAC*

Introduction

The benign cutaneous or subcutaneous cysts known as epidermoid cysts can develop anywhere on the body. Epidermal inclusion cysts (EIC) in the breast are a rare benign disease. This phrase describes cysts that develop due to the proliferation and implantation of epidermal components within a defined dermis area. Cysts of this type can develop anywhere in the body. It is uncommon for EIC to grow in the breast skin. Such lesions are typically mistaken for breast lumps and are not one of the primary differential diagnoses for benign breast lesions. We herein describe a rare instance of an epidermal cyst of the breast in a 30-year-old woman that was initially misdiagnosed as a fibroadenoma but was ultimately determined to be an EIC after fine needle aspiration.

Case report

A palpable tumor in the right breast of a 35-year-old woman had been present for a year and had progressively become larger. Pain, fever, coughing, or trauma were not previously reported. The patient did not mention having ever had pulmonary tuberculosis, a chronic illness, or taking any medications for an extended period. A solitary, 2.5 2 cm, non-tender, movable enlargement was found during a physical examination in the upper outer quadrant of the right breast. The breast had no secretion, and the areola and nipple weren't very noteworthy. On the opposite side, the axilla was healthy. An analysis of the entire system found nothing unusual. The patient was sent for FNAC after receiving a clinically tentative diagnosis of either fibroadenoma or mastitis. Prior USG had been completed. The next time an ultrasound was performed, a substantial, well-circumscribed, heterogeneously hypoechoic mass measuring 2x1 cm was visible. Within the lesion, there was no colour flow indication seen. Under strict aseptic guidelines, the FNAC of the bulge was carried out using a 23-gauge needle. The smears were stained with H&E stains for early identification, and the aspirate was granular and white. The smears revealed numerous sheets, clusters, and dispersed anucleated squames with only a tiny amount of anucleate keratin. No more cellular components were visible. The findings were consistent with the epidermoid cyst **(Figure 1.)**.

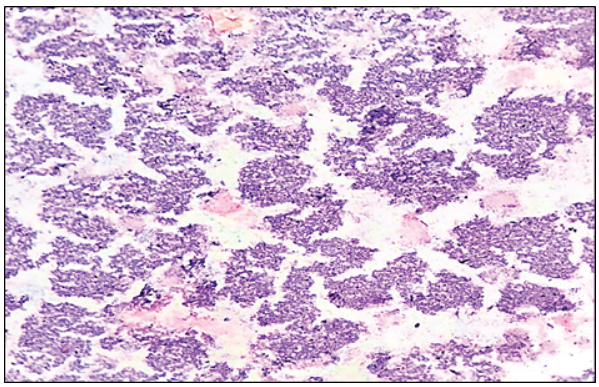

Fig 1. FNAC shows anucleated keratin and a few anucleated squames

Discussion

An epidermoid cyst is a benign cystic lesion that develops when epidermal components proliferate and are implanted in a specific dermis area. Epidermoid cysts are pretty uncommon in the breast. The head, neck, face, back, and trunk are most frequently involved. Clinically and radiologically, it was often misinterpreted as benign in young people or malignant in older people with breast lesions. The differential diagnoses include mastitis/lipoma, low-grade mucinous cancer, phyllodes, and fibro adenoma. On FNAC, all of these were quickly recognised. As a result, FNAC plays a crucial preoperative function because it is an outdoor therapy that is quick, simple, and straightforward to do (1). EIC may arise from several causes that could

harm the epidermis placed within the breast tissue (2). In our case, the aetiology of EIC appears to be a hair follicle obstruction because there is no history of prior trauma, surgery, or lumps. EIC in the breast grows deeply into the subcutaneous tissue, making it difficult to clinically and radiologically identify a breast tumour because the breast contains flexible fat and mammary gland tissue under its skin. It may resemble duct carcinoma in elderly individuals, while it is frequently mistaken for a fibroadenoma in younger people. But as in our instance, secondary inflammation in the EIC of the breast can potentially result in a false clinical diagnosis of mastitis. We misdiagnosed it as recurrent mastitis, possibly caused by tuberculosis, because the patient had a history of pain coupled with glistening overlaying skin in the past and present (2). Rupture, inflammation, and abscess are the most frequent consequences of the epidermoid cyst(1). Despite being known to be benign, epidermal inclusion cysts occasionally can turn malignant and develop into squamous cell carcinoma (3). According to Cameron and Hilsinger, the cyst wall epithelium does sometimes (0.045%) develop into cancer (4). The FNAC plays a crucial role in this situation because its output is straightforward, simple to use, rapid, and accurate. Lesions without symptoms don't need to be treated. In these situations, surgical excision and histological analysis are required to diagnose and arrest malignant transformation development properly.

Conclusion

Epidermal inclusion cyst is a rare entity in the breast and is under-reported because of insignificant clinical presentation and unknown etiopathogenesis. We have presented this case because of its rare presentation. This example also showed the significance of FNAC, which can be utilised to definitively diagnose this lesion and allay unfounded fears of underlying cancer.

Source(s) of Support: Nil

Conflict of Interest: Nil

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ISSN 2958-6607

JOURNAL OF AD-DIN AKIJ MEDICAL COLLEGE

An official organ of Ad-din Akij Medical College