CLINICOPATHOLOGICAL PROFILE OF CERVICAL CANCER PATIENTS ATTENDING IN A SPECIALIZED HOSPITAL

AFROJ S1, BANU MA2, SULTANA S3, JAHAN R4, RAHMAN S5, BEGUM N6

Abstract

Background: Cervical cancer is one of the leading causes of death among women in our country. It is a preventable disease and early carcinoma cervix can be cured by proper treatment. Lack of countrywide well accepted screening program of cervical cancer may be a cause of this hidden advancement of disease.

Objectives: To assess the clinical and pathological profile of patients with cervical cancer.

Method: This cross sectional descriptive study was conducted in the Department of Gynaecology of National Institute of Cancer Research & Hospital (NICRH) from January, 2011 to December, 2011. Initially 76 patients were enrolled in the study by purposive sampling. Thereafter they were scrutinized by eligibility criteria and ultimately 67 patients were finalized. A case record form was prepared which was pre-structured, interview and observation based and peer reviewed. Data regarding socio-demographic, clinical and pathological profiles were collected in standard data sheet. Data were recorded, compiled, edited and analyzed. P-value was determined as significant at <0.05.

Results: The mean age of 67 patients were 44.9±12.01 years (age range: 20-75 years). 74.6% patients were married, 79.1% were housewife and 50.7% were illiterate/only can sign. The household income was <10,000 BDT/month in case of 58.2% cases whereas 10,000-25,000 in 38.8% cases. Among study population 47.8% and 31.3%adenoc patients were staged as stage-II and stage-III, on the contrary 19.4% and 1.5% were staged as stage I and IV. Majority of patients 86.57% are suffering from aqueous cell carcinoma and only 13.43% had carcinoma. Most of the patient in advanced stage 32.75% in stage IIIB, 29.3% stage IIIB. In this study all patients had excessive P/V discharge, among them 67.16% foul smelling and 19.4% blood stained, 764.1% irregular P/V bleeding and 86.56% postcoital bleeding. Regarding identifiable risk factors grand multipara 79.1%, low socioeconomic group 58.2% and early marriage 49.25% ,

Conclusion: There are several risk factors available among our cervical cancer patients like early marriage, multipariy, low socioeconomic codition, multiple sex partner. Most of them are suffering from squamous cell carcinoma. The alarming clinical presentation such as blood stained or foul smelling PV discharge, irregular PV bleeding and postcoital bleeding should be considered seriously for seeking medical attention.

Key words: Cervical Cancer, Risk factors, Clinicopathological profile.

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Introduction:

Globally, 13% of all deaths are observed due to cancer1. Cervical cancer is one of the principal culprits that is responsible for 2, 66,000 deaths annually according to GLOBOCON 2012 reports2. It claims 12% of all women cancers. 85% of all cervical cancers are found in the third world3. In our neighbouring country India almost 21-23% of all female cancers is cervical cancer. Unfortunately, we have no such population

1. Dr. Sultana Afroj, Associate Professor, Department of Obstetrics & Gynaecology, Dhaka Medical College, Dhaka
2. Dr. Mahbuba Akhter Banu, Associate Professor, Department of Obstetrics & Gynaecology, Sir Salimullah Medical College, Dhaka
3. Dr. Sufia Sultana, Associate Professor, Department of Obstetrics & Gynaecology, Dhaka Medical College, Dhaka
4. Dr. Raunak Jahan, Junior Consultant, Department of Obstetrics & Gynaecology, Shaheed Suhrawardy Medical College, Dhaka
5. Dr. Shamina Rahman, Junior Consultant, Department of Obstetrics & Gynaecology, Dhaka Medical College, Dhaka
6. Dr. Nazneen Begum, Associate Professor, Department of Obstetrics & Gynaecology, Dhaka Medical College, Dhaka

Correspondence: Dr. Sultana Afroj, Associate Professor, Department of Obstetrics & Gynaecology, Dhaka Medical College, Dhaka, Phone: 01714262412, E-mail: safroj31@yahoo.com

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based data regarding this dreadful condition. It is certain that all the important risk factors of this disease like early marriage, early starting of sexual activity, multiparity, socioeconomic condition and higher incidence of sexually transmitted diseases (STDs) are commonly observed among our women. The good result of cervical cancer prevention and screening are yet to be observed in our country which is a driving force of reduction of cervical cancer in the western world. Besides, still the lack of awareness in mass population coupled with financial and geographical inaccessibility to the standard cancer care are the principal barriers in this regard.

National Institute of Cancer Research & Hospital is the only super specialized dedicated cancer hospital in Bangladesh. It is a 300 bed hospital that has to tackle the massive burden of cancer population of Bangladesh. It was mentioned in Worldometer, 2017; World Bank, 2017 that among 162,910,864 people 18.5% of the total population are making <1.9 USD per day. For this reason majority country people have to receive care through government sponsored hospitals and health centers. NICRH is also functioning as the hub of zenith cancer care center in the country.

The main aim of this study was to observe the clinical and pathological profiles of cervical cancer patients in NICRH.

**Materials & Methods:**
This cross-sectional observational study was conducted in the department of Gynae-Oncology in National Institute of Cancer Research & Hospital, Mohakhali, Dhaka from January, 2011 to December, 2011. Initially, 76 patients were enrolled in the study by purposive sampling. Thereafter, the moribund patients and the patients who denied to participate in the study were excluded. So ultimately the total sample size was 67. A pre-structured, interview and observation based, peer-reviewed case record form was prepared. Data were recorded in the standard data sheet. It was then compiled, edited and analyzed in the special software SPSS (Statistical Package for Social Science, Chicago, USA) version 23. Data analysis was done by chi square test. Mean, frequency and percentages of different variables were also determined. P-value was determined significant at <0.05.

**Results:**

Table-I

| Age group (in years) | Frequency (%) |
|---------------------|--------------|
| 20 – 30             | 6 (9%)       |
| 31 – 40             | 25 (37.3%)   |
| 41 – 50             | 18 (26.9%)   |
| 51 – 60             | 14 (20.9%)   |
| 61 – 70             | 4 (6%)       |
| **Total**           | **67 (100%)**|

Mean age ± SD (in years)    44.9±12.01
Age range (in years)        20 – 75

Table-I shows that out of 67 patients, 37.3%, 26.9% and 20.9% belonged to age group 31-40 years,41-50 years and 51-60 years respectively. 9% and 6% patients were two extreme of age like, 20-30 years and 61-70 years age group respectively. The mean age of the participants was 44.9±12.01 years (age range: 20-75 years).

Fig.-1: Distribution of patients according to age (N=67).

Fig.-2: Distribution of patients according to histopathology report (N=67).
Figure-2 reveals that out of 67 patients, 86.57% and 13.43% were found as squamous cell carcinoma and adenocarcinoma respectively.

**Table-II**

*Epidemiological characteristics of cervical cancer patients (N=67)*

| Variables                          | Values (N=67) |
|------------------------------------|---------------|
| Age (mean±SD) in years             | 44.9±12.01    |
| Marital status (n,%)               |               |
| Married                            | 50(74.6%)     |
| Divorced                           | 2(3%)         |
| Widow                              | 13(19.4%)     |
| Occupational status (n, %)         |               |
| Service                            | 3(4.5%)       |
| Business                           | 3(4.5%)       |
| Day labourer                       | 8(11.9%)      |
| Housewife                          | 53(79.1%)     |
| Educational status                 |               |
| Illiterate/only can sign           | 34(50.7%)     |
| Primary                            | 28(41.8%)     |
| SSC                                | 4(6%)         |
| Graduate & above                   | 1(1.5%)       |
| Household income status (n, %)     |               |
| <10,000                            | 39(58.2%)     |
| 10000 – 25000                      | 26(38.8%)     |
| >25000                             | 2(3%)         |
| Smoking status (n, %)              |               |
| Yes                                | 16(23.9%)     |
| No                                 | 51(76.1%)     |
| Smokeless tobacco (n, %)           |               |
| Yes                                | 39(58.2%)     |
| No                                 | 28(41.8%)     |

Table-II shows the overall epidemiological characteristics of the sample population highest values of different variables revealed that 74.6% patients were married 79.1% were housewife, 50.7% were illiterate or only can sign, 58.2% from low socioeconomic status (<10,000/month), 76.1% non-smokers, 58.2% took smokeless tobacco.

**Table-III**

*Distribution of patients according to risk factors (N=67)*

| Risk factors                          | Frequency (%) |
|---------------------------------------|---------------|
| Grand multiparity (>4)                | 53(79.1%)     |
| Age of marriage(<20years)             | 33(49.25%)    |
| Low socioeconomic group               | 39(58.2%)     |
| Multiple sex partner                  | 15(22.4%)     |
| OCP use                               | 30(44.8%)     |
| High risk male partner                | 12(17.9%)     |
| Poor personal hygiene                 | 42(62.7%)     |
| Coitus during menstruation            | 21(31.4%)     |

Table-3 reveals the presence of different risk factors that may be responsible for cervical cancer. It was found here that 79.1% were grand multiparous, 49.25% were (less than 20 years) early age marriage group, 58.2% from low socioeconomic group, 22.4% had multiple sex partner, 44.8% used OCP, 17.9% had high risk male partner who were polygamous, 62.7% adopted poor personal hygiene and 31.4% practiced coitus during menstruation.

**Table-IV**

*Staging of cervical cancer in relation to histological variants (N=67)*

| Total | Squamous cell carcinoma | Adenocarcinoma | P-value |
|-------|-------------------------|----------------|---------|
| IB    | 13 (19.4%)              | 11 (18.96%)    | 2 (22.22%) | 0.7 NS |
| IIA   | 12 (17.91%)             | 9 (15.5%)      | 3 (33.33%)|
| IIB   | 20 (29.85%)             | 17 (29.31%)    | 3 (33.33%)|
| IIIA  | 1 (1.49%)               | 1 (1.72%)      | 0 (0%)   |
| IIIB  | 20 (29.85%)             | 19 (32.75%)    | 1 (11.11%)|
| IVA   | 1 (1.49%)               | 1 (1.72%)      | 0 (0%)   |

Table-4 reveals Squamous cell carcinoma 18.96%, 44.81%, 34.47% and 1.72% in stage I, II, III and IV and rest of the patients had adenocarcinoma.
Table-V

Clinical profile and their correlation to diagnosis (N=67)

| Clinical profile | Stage-I IB | Stage-II IIA | Stage-II IIB | Stage-III IIIA | Stage-IV IIIB | Stage-IV IVA | p-value |
|------------------|------------|--------------|--------------|----------------|---------------|--------------|---------|
| Discharge status |            |              |              |                |               |              |         |
| Foul smelling(n=45) | 0(0%) | 10(22.22%) | 16(35.55%) | 1(2.22%) | 17(37.77%) | 1(2.22%) | 0.79NS |
| Blood stained(n=8) | 0 (0%) | 2(25%) | 4(50%) | 0 (0%) | 2 (25%) | 0 (0%) |         |
| Irregular PV bleeding | Present (n=43) | 2(4.65%) | 5(11.62%) | 14(32.55%) | 1(2.32%) | 17(39.53%) | 0 (0%) | 0.001S |
|                  | Absent (n=24) | 11(45.83%) | 7(29.16%) | 6(13.95%) | 0 (0%) | 3 (12.50%) | 1(4.10%) |         |
| Post coital bleeding | Present (n=58) | 11(18.96%) | 11(18.96%) | 17(29.31%) | 1(1.72%) | 17(29.31%) | 1(1.72%) | 0.983NS |
|                  | Absent (n=9) | 2(22.22%) | 1(11.11%) | 3(33.33%) | 0 (0%) | 3 (33.33%) | 0 (0%) |         |

Table-5 shows that out of 67 patients all had excessive PV discharge. Among them 45(82.08%) had foul smelling and 8(17.91%) bloody discharge. All 13 patients of stage IB had though excessive PV discharge but it was neither foul smelling nor blood stained. Irregular PV bleeding was also observed in case of 43 (64.18%) patients, 58(86.56%) patients noticed post coital bleeding. There was no statistically significant difference (p>0.05) found between the stages in relation to clinical presentation except irregular PV bleeding (p=0.001).

Discussion:
Cervical cancer is one of the most dreadful conditions in the world of Gynae-oncology. The annual incidence of this disease in Bangladesh is approximately 119569. The developing and least developed countries claim a handsome figure of cervical cancer (80%) in all female cancer, incidence among the globally affected women (4,68,000)10. The percentage of cervical cancer in NICRH Dhaka, Bangladesh comprises 19.2% of all admitted cancer patient11.

The mean age of our sample population was observed as 44.9±12.01 years (age range: 20-75 years). These results are almost similar to the reports of Jabeen S et al. and her colleagues in 2014 from the same study place12.

In this study 74.6% of our respondents were married which was subsequently followed by 8% and 2% widowed and divorced respondents respectively12.

Out of 67 respondents, 58.2%, 38.8% and 3% belonged to <10,000, 10,000-25,000 and >25,000 BDT per month household income respectively. As low socioeconomic condition is an established risk factor13 in case of cervical cancer our study respondents may also be affected by this factor.

The earliest symptom of cervical cancer is thin watery blood tinged discharge that frequently overlooked or unrecognized by patients14. We have observed excessive per vaginal discharge as the earliest presenting complaints of all patients, irregular per vaginal bleeding was observed in case of 80.59% cases. Post coital bleeding was recorded in case of 86.56% cases.

Cervical cancer is the only clinical condition of Gyneoncology which is staged on the basis of tumor size, vaginal or parametrial involvement, bladder/rectum extension and distant metastases. These require examination under anesthesia, imaging studies like MRI to determine tumor size, degree of stromal penetrations, parametrial involvement, vaginal extension and corpus extension with high accuracy15.

We have also followed the procedures according to ESMO guideline to stage the disease. We have found 47.8%, 31.3%, 19.4% and 1.5% patients were found stage II, stage-III, stage-I and stage-IV respectively. Likewise, the prevalence of late stage at initial presentation to the OPD among...
cervical cancer patients are reported. 98% from Zaria, Nigeria, 90% from National Hospital, Tanzania, 81% from Nepal and 80% from Gujrat cancer and Research Institute, India also supported our findings. Still yet our stakeholders could not provide country wide cervical cancer screening program due to financial, technical and skilled manpower limitations. The similar scenario was observed also in India where it was estimated that even with a gigantic effort to expand cytology screening services, it will be more impossible to screen one-fourth of total population once in a lifetime in near future.

For this point of views, we have to work hard and financial allotment must be increased in these issues to detect early cervical cancer as it is a quite smart insidious clinical condition. But though it is worth mentioning here that a previous study showed the causes of delayed presentation of the disease where it was evident that 91% had lack of information and 37% had financial issue for not seeking immediate medical attention. Lack of oncologist, referrals and negligence were also other concerning issues in this regard.

In this study, 86.56% and rest 13.43% of our patients were suffering from squamous cell carcinoma and adenocarcinoma respectively which were in line of Munoz et al. We can also assume that the higher parity in our perspective attributed a lot to produce much higher squamous cell carcinoma than adenocarcinoma.

**Conclusion:**

Our study reveals that major risk factors are multiparity, early marriage and low socio economic condition. Most of the cervical cancer patients presented in advanced stage and are suffering from squamous cell carcinoma. The alarming clinical presentation like PV discharge with blood tinge, irregular PV bleeding and postcoital bleeding should be considered seriously for seeking medical attention.

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