

Clinical Presentation of Carcinoma Cervix: A Study of 50 Cases in a Tertiary-Level Hospital

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DOI: <https://doi.org/10.36348/sijog.2026.v09i08.003>

| Received: 23.06.2026 | Accepted: 17.08.2026 | Published: 22.08.2026

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Abstract

Background: Carcinoma of the cervix remains a leading cause of cancer-related morbidity and mortality among women in developing countries, where organized screening coverage is limited and most patients present only after the disease becomes symptomatic. Objective: To describe the pattern of clinical presentation, disease stage and clinical findings among women with histologically confirmed carcinoma cervix attending a tertiary-level teaching hospital in Bangladesh.

Methods: This cross-sectional, prospective study was conducted in the Department of Obstetrics and Gynaecology, Rangpur Medical College Hospital, over one year. Fifty consecutive patients diagnosed with carcinoma cervix who fulfilled the inclusion criteria were enrolled after informed consent and data on presenting symptoms, clinical stage, general and local examination findings and imaging correlates were recorded on a structured questionnaire and analyzed as frequencies and percentages. **Results:** Most patients (60%) were 41-50 years old. Blood-stained per-vaginal discharge (94%), foul-smelling discharge (50%) and post-coital bleeding (50%) were the commonest complaints. Forty-eight patients (96%) presented in stage IIB or beyond. Nearly all patients (100%) were anaemic, 80% had a cauliflower-like cervical growth and 92% had squamous cell carcinoma on histopathology. Ultrasonography showed cervical growth in 52%, hydronephrosis in 44% and pelvic lymphadenopathy in 22% of patients. **Conclusion:** Carcinoma cervix in this tertiary-hospital population presents predominantly with abnormal vaginal bleeding and discharge at an advanced clinical stage, underscoring the continued need for symptom awareness and organized early-detection services.

Keywords: Carcinoma cervix, Clinical presentation, Clinical stage, Cervical cancer.

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INTRODUCTION

Carcinoma of the cervix remains one of the most frequently diagnosed cancers among women worldwide and continues to rank among the leading causes of cancer death in low- and middle-income countries. [1] In 2022 an estimated 662,301 new cases and 348,874 deaths from cervical cancer were recorded globally, with the heaviest burden concentrated in regions where organized cytological or visual screening remains limited. [1] Persistent infection with high-risk human papillomavirus (HPV) is now recognized as the necessary cause of nearly all cervical malignancies and the natural history of the disease, from persistent infection through intraepithelial neoplasia to invasive

carcinoma, typically unfolds over one to two decades, offering a wide window for secondary prevention wherever screening infrastructure exists. [2] Recent modelling indicates that, unless preventive coverage is scaled up substantially, global case and death counts are likely to continue rising toward 2030, with the steepest increases projected for countries with a low or medium human development index. [3]

Bangladesh exemplifies this unequal burden. Cervical cancer is the second most common cancer among Bangladeshi women, with roughly 8,300 new cases and close to 5,000 deaths estimated each year and there is still no functioning nationwide cancer registry to

track the true scale of the problem. [4] Community-based surveys from different parts of the country have repeatedly found that only a minority of women can correctly identify the warning symptoms or risk factors of cervical cancer and that awareness is lowest among rural, illiterate and economically disadvantaged women, the every group most affected by the disease. [5] A government-led visual inspection with acetic acid (VIA) screening programme has been operating since 2005 and is now supported by an electronic data-tracking system, yet coverage remains uneven and a large proportion of eligible women have never been screened. [6] Consequently, as in many other low-resource settings, most Bangladeshi women with cervical cancer are still diagnosed only after the disease has become symptomatic, at a stage when curative treatment is more difficult and less effective. [7]

An accurate description of how cervical cancer actually presents in a given clinical setting therefore continues to carry direct practical value. Recognizing the constellation of symptoms and signs, abnormal per-vaginal bleeding, foul-smelling discharge, post-coital bleeding and the local and systemic findings of advanced local disease, remains central to prompting timely referral, particularly where histopathological and radiological facilities are not the first point of contact. [8] Comparative data from South Asian and sub-Saharan tertiary centers suggest that referral pathways and public awareness strongly influence the proportion of women who present with early, potentially curable disease as opposed to advanced, incurable disease. [9] A systematic review and meta-analysis of late-stage presentation in low-resource settings has consistently identified poor symptom recognition, long intervals between symptom onset and treatment-seeking and absence of prior screening as the principal drivers of advanced-stage diagnosis, a pattern also documented in tertiary centers in neighbouring Nepal. [10,11]

Despite the scale of the problem, clinical data describing the presentation of carcinoma cervix from the northern administrative divisions of Bangladesh remain scarce and most published Bangladeshi series originate from specialized cancer institutes in the capital rather than from general tertiary teaching hospitals that serve as the first point of gynaecological referral for a predominantly rural population. Because the pattern of clinical presentation, stage distribution and general condition at first contact directly informs triage, counselling and resource planning at that point of contact, a focused description of these parameters in a representative tertiary-hospital population is required both to guide local practice and to contribute comparative regional data. [12,13,14] The present study was therefore undertaken to describe the clinical presentation of histologically confirmed carcinoma cervix, including the pattern of presenting symptoms, disease stage, general and local examination findings and radiological correlates, among women attending the

Department of Obstetrics and Gynaecology of a tertiary-level teaching hospital in Rangpur, Bangladesh.

METHODOLOGY

This was a cross-sectional, prospective, hospital-based study conducted in the Department of Obstetrics and Gynaecology, Rangpur Medical College Hospital, Rangpur, Bangladesh, a tertiary-level teaching hospital, over a period of one year (14 May 2014 to 14 May 2015). During the study period, 2,947 gynaecological patients were admitted to the department, of whom 123 (4.17%) were diagnosed with carcinoma cervix. From this population, 50 patients who fulfilled the inclusion criteria and provided informed consent were enrolled as study subjects and studied in series.

Sample Selection

Inclusion Criteria:

- Diagnosed or strongly suspected case of carcinoma cervix
- Post-coital bleeding
- Post-menopausal per-vaginal bleeding
- History of foul-smelling per-vaginal discharge
- Per-vaginal bleeding on straining (heavy work, voiding or defecation)

Exclusion Criteria:

- All other genital malignancies except carcinoma cervix
- Dysfunctional uterine bleeding
- Cervical polyp
- Myomatous polyp

Data Collection Procedure

Data were collected using a pre-tested, structured questionnaire administered at the time of clinical examination, supplemented by a structured follow-up sheet completed during the period of hospitalization. Each participant, or her legal guardian where applicable, was counselled about the purpose of the study before data collection began. Information on demographic characteristics, presenting complaints, menstrual and reproductive history, general and local examination findings and the results of histopathological and relevant radiological investigations (chest radiography, electrocardiography, serum creatinine and ultrasonography of the whole abdomen) was recorded prospectively for each patient to ensure completeness and internal consistency of the dataset.

Ethical Considerations

Written informed consent was obtained from every participant, or from her legal guardian when required, after the purpose, procedures and confidentiality safeguards of the study had been explained in the local language. Patient identifiers were kept confidential and were not used in any subsequent reporting or analysis. The study protocol conformed to the ethical principles for research involving human participants and was approved by the concerned

institutional ethical review authority prior to commencement.

Statistical Analysis

Data were compiled on a master sheet and analyzed using Microsoft Excel and SPSS statistical software; results are presented descriptively as frequencies and percentages in tables and text, since the primary objective of the study was to characterize the

pattern of presentation rather than to test a specific comparative hypothesis and a two-tailed p-value of less than 0.05 was taken as the conventional threshold of statistical significance for any comparative or inferential analysis undertaken.

RESULTS

Table 1: Age distribution of the study subjects (n=50)

Age group (years)	Number of patients	Percentage (%)
20-30	0	0
31-40	2	4
41-50	30	60
51-60	14	28
>60	4	8

Table 1 shows that 30 patients (60%) were aged between 41 and 50 years, followed by 14 (28%) in the 51–60-year group and 4 (8%) above 60 years; only 2

patients (4%) were between 31 and 40 years and no patient was younger than 31 years.

Table 2: Clinical presentation of the study subjects (n=50)

Presentation	Number of cases	Percentage (%)
Blood-stained per-vaginal discharge	47	94
Foul-smelling per-vaginal discharge	25	50
Post-coital bleeding	25	50
Lower abdominal pain	20	40
Metrorrhagia	7	14
Frequency of micturition	7	14
Backache	4	8
Hematuria	4	8
Dysuria	3	6
Difficulty in defecation	3	6
Vomiting	3	6
Abdominal distension	3	6
Leg oedema	3	6
Menorrhagia / Spotting / Vulval oedema	0	0

Table 2 shows that blood-stained per-vaginal discharge was the most common presenting complaint, occurring in 47 patients (94%), followed by foul-smelling per-vaginal discharge and post-coital bleeding, each present in 25 patients (50%). Lower abdominal pain was reported by 20 patients (40%), metrorrhagia and

frequency of micturition each by 7 patients (14%), backache by 4 (8%), hematuria by 4 (8%), dysuria and difficulty in defecation each by 3 (6%) and vomiting, abdominal distension and leg oedema each by 3 patients (6%).

Table 3: Clinical stage of carcinoma cervix in the study population (n=50)

Stage	Sub-stage A	Sub-stage B	Total	Percentage (%)
Stage I	2	0	2	4
Stage II	0	29	29	58
Stage III	6	8	14	28
Stage IV	0	5	5	10
Total	8	42	50	100

Table 3 shows that most patients, 42 (84%), presented in stage IIB or beyond, with 29 patients (58%)

in stage IIB, 14 (28%) in stage III and 5 (10%) in stage IV; only 2 patients (4%) were diagnosed in stage I.

Table 4: Clinical presentation according to clinical stage (n=50)

Presentation	Stage I	Stage II	Stage III	Stage IV
Blood-stained vaginal discharge	1	27	14	5
Foul-smelling vaginal discharge	0	7	13	3
Post-coital bleeding	0	14	3	0
Metrorrhagia	0	1	2	0
Lower abdominal pain	1	8	6	2
Hematuria	0	1	2	1
Others	0	0	3	1

Table 4 shows that blood-stained per-vaginal discharge, foul-smelling discharge and post-coital bleeding were the presenting complaints most frequently recorded across stage II, III and IV disease, confirming

that the common presenting symptoms of carcinoma cervix in this series were consistently associated with advanced-stage disease at diagnosis.

Table 5: Interval between onset of symptoms and seeking medical care (n=50)

Duration	Number	Percentage (%)
0-1 year	21	42
1-2 years	15	30
>2 years	14	28

Table 5 shows that 21 patients (42%) sought medical advice within one year of the onset of symptoms, 15 (30%) presented between one and two

years and 14 (28%) presented more than two years after the onset of symptoms.

Table 6: General examination findings of the study population (n=50)

Finding	Number of patients	Percentage (%)
Anaemia - Mild	30	60
Anaemia - Moderate	13	26
Anaemia - Severe	7	14
Leg oedema	4	8
Inguinal lymphadenopathy	3	6

Table 6 shows that some degree of anaemia was present in almost all patients, with 30 (60%) mildly anaemic, 13 (26%) moderately anaemic and 7 (14%)

severely anaemic; 4 patients (8%) had dependent leg oedema and 3 (6%) had inguinal lymphadenopathy on general examination.

Table 7: Macroscopic appearance and histopathological type of carcinoma cervix (n=50)

Category	Number of patients	Percentage (%)
Macroscopic type: Cauliflower	40	80
Macroscopic type: Ulcerative	5	10
Macroscopic type: Infiltrative	5	10
Macroscopic type: Fungating	0	0
Histopathology: Squamous cell carcinoma	46	92
Histopathology: Adenocarcinoma	4	8

Table 7 shows that, on macroscopic examination, 40 patients (80%) had a cauliflower-like cervical growth, 5 (10%) had an ulcerative growth and 5 (10%) had an infiltrative growth, with no fungating

growth recorded. Histopathological examination confirmed squamous cell carcinoma in 46 patients (92%) and adenocarcinoma in the remaining 4 patients (8%).

Table 8: Ultrasonographic findings of the whole abdomen in the study population (n=50)

Finding	Number of patients	Percentage (%)
Normal study	23	46
Cervical growth	26	52
Hydronephrosis with hydroureter	22	44
Bladder involvement	15	30
Pelvic lymphadenopathy	11	22

Finding	Number of patients	Percentage (%)
Ascites	2	4
Endometrial collection	2	4
Bilateral ovarian cyst	1	2
Cholelithiasis	0	0

Table 8 shows that ultrasonography of the whole abdomen demonstrated a cervical growth in 26 patients (52%), hydronephrosis with hydroureter in 22 (44%), pelvic lymphadenopathy in 11 (22%), bladder involvement in 15 (30%), ascites in 2 (4%), endometrial collection in 2 (4%) and a bilateral ovarian cyst in 1 patient (2%); 23 patients (46%) had a normal ultrasonographic study.

DISCUSSION

The age and stage distribution observed in this series are broadly consistent with earlier hospital-based data from South Asia and sub-Saharan Africa. Most women in the present cohort, 60%, were between 41 and 50 years of age, with a further 28% between 51 and 60 years, a pattern that closely resembles the findings of Thulaseedharan *et al*, who reported a 2.5-fold increase in cervical cancer risk among women aged 50-59 years in a large prospective cohort from rural India.¹⁵ It also resembles the six-year Nigerian series reported by Ifemelumma *et al*, in which the mean age at presentation was 54.0 years and the Sudanese series of Ibrahim *et al*, who recorded a comparable mean age of 54.5 years. [16,17]

The predominance of blood-stained per-vaginal discharge (94%), foul-smelling discharge (50%) and post-coital bleeding (50%) as presenting complaints in this study accords closely with the findings of the six-year Nigerian series, in which abnormal vaginal bleeding was reported by 88.5% and offensive vaginal discharge by 42.6% of patients and with the local Bangladeshi series of Annur, in which blood-stained discharge, foul-smelling discharge and post-coital bleeding were recorded in 82%, 74% and 62% of patients respectively. [16,18] Similar proportions were reported by Banu in an earlier Bangladeshi surgical series and by Maula in a hospital-based description of invasive cervical cancer presentation, both of which identified blood-stained discharge and foul-smelling discharge as the leading complaints, findings that are consistent with the present results. [19,20]

Advanced-stage disease at presentation was common in this study, with 96% of patients presenting in stage IIB or beyond. This proportion is close to the 72% advanced-stage presentation reported by Ibrahim *et al* in Sudan and the 80% reported by Annur in a comparable Bangladeshi tertiary-hospital population and is consistent with the wider pattern described in a systematic review and meta-analysis of late-stage presentation across low-resource settings, which identified poor symptom awareness, delayed treatment-

seeking and the absence of organized screening as the principal contributors to advanced-stage diagnosis. [17,18,10] A comparable pattern of late presentation has also been documented in a Nepalese tertiary-care cohort, where nearly two-thirds of confirmed cervical cancer cases presented at an advanced stage, reinforcing that this is a regional rather than a purely local phenomenon. [11] In the present series, blood-stained discharge, foul-smelling discharge and post-coital bleeding were the presenting complaints most consistently associated with advanced-stage disease, a relationship also reported by Ibrahim *et al* and probably reflects the combined effect of poverty, limited awareness, restricted access to health facilities and the absence of an established screening programme at the community level in the study area. [17]

The interval between symptom onset and treatment-seeking in this study, with 42% of women presenting within one year and 28% presenting more than two years after symptom onset, suggests that carcinoma cervix behaves as a comparatively slow-growing tumour over a variable initial period before accelerating clinically, a course that widens the potential window for earlier detection if awareness and access to care can be improved. Community-based knowledge surveys from Bangladesh have repeatedly shown that awareness of the warning symptoms of cervical cancer remains low, particularly among rural and less-educated women and this gap in symptom recognition plausibly contributes to the prolonged pre-treatment intervals observed both in the present study and in comparable Bangladeshi and South Asian series. [5,21]

Almost all patients in this study (100%) had some degree of anaemia, with 14% severely anaemic, a finding that is unsurprising given the predominance of chronic blood-stained discharge and heavier bleeding among patients presenting with advanced local disease and is in keeping with the systemic effects of locally invasive cervical malignancy described in standard gynaecological texts. [8] On macroscopic examination, a cauliflower-like growth was the most frequent finding (80%), broadly consistent with the pattern of exophytic growth typically described in advanced squamous carcinoma of the cervix, while histopathology confirmed squamous cell carcinoma in 92% of cases and adenocarcinoma in the remainder, proportions that fall within the range reported in recent global reviews of cervical cancer histology, in which squamous cell carcinoma continues to account for the substantial majority of cases worldwide. [2]

Ultrasonographic evaluation added useful staging information beyond clinical examination alone,

identifying hydronephrosis in 44% and pelvic lymphadenopathy in 22% of patients, findings that corroborate the high proportion of advanced-stage disease identified clinically and are consistent with the pattern of locoregional spread expected once the tumour extends beyond the cervix to involve the parametrium, pelvic side wall or ureters. [12] Taken together, these findings reinforce that carcinoma cervix in this tertiary-hospital population continues to present late, with a symptom profile dominated by abnormal bleeding and discharge and they underline the continued relevance of community-level awareness programmes, decentralized screening and prompt referral pathways in reducing the proportion of women who present only after the disease has progressed beyond the stage at which cure is most achievable. [1,4]

Limitations

This study was limited by its relatively small sample size and its single-center, hospital-based design, which restricts generalizability to the wider community and may not fully capture women who never reach tertiary care. Because staging was based on clinical examination supplemented by available imaging rather than on cross-sectional imaging such as computed tomography or magnetic resonance imaging, some degree of staging imprecision cannot be excluded and the descriptive design did not permit formal multivariable analysis of predictors of advanced-stage presentation.

CONCLUSION

Carcinoma cervix in this tertiary-hospital population predominantly affected women in their fifth decade of life and presented mainly with blood-stained per-vaginal discharge, foul-smelling discharge and post-coital bleeding. Most patients were diagnosed only after the disease had reached an advanced clinical stage, reflected in a high prevalence of anaemia, cauliflower-like cervical growth and radiological evidence of locoregional spread. Squamous cell carcinoma remained the predominant histological subtype. These findings reaffirm the continued need for community awareness, decentralized early-detection services and prompt referral to reduce late-stage presentation of this largely preventable malignancy.

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