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Journal of Army Medical College Jashore (JAMCJ) is a leading, open access, peer-reviewed scientific journal on medical science for rapid publication of articles published Army Medical College Jashore, Bangladesh. This journal provides quick initial decisions followed by a high-quality medical editing service and an excellent publishing service to its authors. This journal has been launched since January 2020 and published 2 times per year. This journal aims to publish scientifically written, evidence-based articles from all disciplines of medical sciences and clinical practice, preventive medicine, epidemiology as well as healthcare research. It provides a great scope to publish different kinds of articles including original research papers, reviews of specific topics, case reports and short research communications. Submissions of basic and clinical research both are considered.

JAMCJ publishes studies performed by multi-center groups in the various disciplines of medicine, including clinical trials and cohort studies from large patient populations, specifically phase I, phase II, and phase III studies performed under the auspices of groups such as general clinical research centers, cooperative oncology groups, etc. Reports of patients with common presentations or diseases, especially studies that delineate the natural history and therapy of important conditions are also published. Reviews oriented to the practicing internist and diagnostic puzzles, complete with images from a variety of specialties are also published. Careful physiological or pharmacological studies that explain the normal function or the body's response to disease as well as analytic reviews such as meta-analyses and decision analyses using a formal structure to summarize an important field are also acceptable.

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Aims and Scopes of the Journal

Journal of Army Medical College Jashore (JAMCJ) is an open access, peer-reviewed, scholarly, scientific medical journal. This journal aims to publish scientifically written, evidence-based articles from all disciplines of medical sciences, clinical practice, nursing, preventive medicine, epidemiology and healthcare research. Manuscripts should present novel findings addressing significant questions in clinical medicine research and practice, in the form of original articles, editorial, reviews, short communications, case reports, letter to the editor and others. In addition to that **JAMCJ** publishes studies performed by multi-center groups in the various disciplines of medicine, including clinical trials and cohort studies. Careful physiological or pharmacological studies that explain normal function or the body's response to disease as well as analytic reviews such as meta-analyses and decision analyses using a formal structure to summarize an important field are acceptable to publish.

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Title Page: It should be paginated as page 1 of the paper. It should carry the title, authors' names and their affiliations, running title, address for correspondence including Email address, mobile number and ORCID Id.

Title: Must be informative, specific and short and should not exceed 100 words.

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Abstract: It must start on a new page carrying the following information: (a) Title (b) Abstract body (c) Key words (d) Running title. It should not exceed 350 words excluding the title and the keywords. The abstract must be concise, clear and informative rather than indicative. The abstract must be in a structured form consisting of background, objectives, methodology, result and conclusion.

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Introduction: This section should state the relevance and background to the study, its rationale and general objective. It should not exceed 450 to 500 words. Last sentence of this section will be the general objective of the study.

Methodology: This section should deal with how the work was carried out. The procedure adopted should be described in sufficient detail to allow the study to be interpreted and repeated by the readers, if necessary. The number of subjects, the number of groups studied, the study design, sources of drugs with dosage regimen or instruments used, statistical methods and ethical aspects must be mentioned under the section in text format not in structured format. The details of statistical analysis used and the level of significance should be stated.

Results: The results should be stated concisely without comments. It should be presented in logical sequence in the text with appropriate reference to tables and/or figures. The same data should not be presented in both tabular and graphic forms. Simple data may be given in the text itself instead of figures or tables. Avoid discussions and conclusions in the results section.

Discussion: This section should deal with the interpretation, rather than recapitulation of results. It is important to discuss the new and significant observations in the light of previous work. Discuss also the weaknesses or pitfalls in the study.

Conclusion: Conclusion must be drawn considering the strengths and weaknesses of the study.

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References: Papers which have been submitted and accepted but not yet published may be included in the list of references with the name of the journal and indicated as "In press". The "unpublished observations" and "personal communications" may not be used as references but may be inserted (in parentheses) in the text. References are to be cited in the text by superscripted number and should be in the order in which they appear. References cited only in tables or in legends to figures should be numbered in accordance with a sequence established by the first identification in the text of the particular table or illustration. The references must be verified by the author(s) against the original documents. The list of references should be in the Modified Vancouver style.

Tables: The number of table should be 3 or 4 in number. Each table must be self-explanatory and presented in such a way that they are easily understandable. It should be typed with double spacing and numbered consecutively with Arabic numerals. Provide a short descriptive caption above each table with foot notes and/or explanations underneath. The number of observations, subjects and the units of numerical figures must be given.

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Systematic Review or Meta-Analysis: These should be critical assessments of current evidence covering a broad range of topics of concern to those working in the specific field of journal. Systematic reviews should be 4000-5000 words (abstracts to be structured as above). Authors should report systematic reviews and meta-analyses in accordance with the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) statement.

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The manuscript should not be divided into sub-sections. It may have up to 1200 words (including a maximum of 5 references) and one figure or one table.

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The case report should contain abstract (need not be structured), keywords, introduction, case presentation, discussion, conclusion & references (including a maximum of 20 references) in a sequential way. The number of case may be one or two, not more than three.

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Authorship credit should be based on

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Authors should meet conditions 1, 2, and 3.

When a large, multicenter group has conducted the work, the group should identify the individuals who accept direct responsibility for the manuscript. These individuals should fully meet the criteria for authorship/contributorship defined above, and editors will ask these individuals to complete journal-specific author and conflict-of-interest disclosure forms.

When submitting a manuscript authored by a group, the corresponding author should clearly indicate the preferred citation and identify all individual authors as well as the group name. Journals generally list other members of the group in the Acknowledgments.

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A. Researchers should be honest about their research. Researchers need to have a high ethical standard at all times during the research, in areas such as receiving funds for research, publishing research results, and fairly compensating participants. More specifically, research papers that are forged, altered, plagiarized, overlapped, and/or dishonest cannot be published either online or in journal and are not eligible for research funds.

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Editorial ***Open Access***

Common Ethical Issues in Research

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Research is the foundation of knowledge and plays an essential role in advancing progress. In the rapidly evolving field of biomedical research, it has significantly improved the quality and quantity of life. According to COPE, "Good research should be well-planned, appropriately designed, and ethically approved. Conducting research to a lower standard may be considered misconduct."

Ethics, also known as moral philosophy, is a branch of philosophy that involves standards or codes of value systems. It is focused on defending, systematizing, and recommending concepts of right and minimizing wrong conduct. Ethical issues in research refer to the guidelines followed by researchers to protect participants' rights, develop effective research strategies, and build a trusted relationship between study participants and investigators[1].

In scientific studies, research ethics plays a crucial role. It involves creating new knowledge with the aim of contributing new ideas to academia. Ethical considerations in research present challenges, including concerns about time, funding, accessibility, and the proper implementation of these factors[2].

Ethical issues in research encompass areas such as informed consent, confidentiality, anonymity, conflicts of interest, respect for participants, plagiarism, risk-benefit analysis, data manipulation, and proper disclosure of potential biases or funding sources. These ethical considerations are crucial to ensuring that research is conducted with integrity and does not cause harm to participants[3,4].

Key Ethical Considerations in Research

1. Informed Consent:

Participants must fully understand the research's purpose, procedures, potential risks, and benefits, as well as how their data will be used, before agreeing to participate.

Relevant information provided to participants includes the research purpose, methods, funding sources, risks, and benefits; the duration of the study; the institutional approval number; and how this relates to their specific situation.

After receiving this information, participants may sign a consent form to confirm their willingness to participate.

2. Confidentiality:

Researchers must protect the privacy of participants by ensuring that data is kept confidential and anonymized where possible.

All identifying information must be removed from final reports, and steps must be taken to safeguard sensitive data during its collection, access, and storage, in accordance with institutional confidentiality protocols[5].

3. Anonymity:

Researchers should ensure that participants remain unidentified throughout the research process. This can be achieved by not collecting personally identifiable information, such as names, phone numbers, or photos.

4. Authorship:

There is no universally agreed definition of authorship in research. Proper authorship should reflect contributions to the study.

5. Conflict of Interest:

Researchers must disclose any conflicts of interest, including personal, commercial, political, academic, or financial interests that could influence the research findings.

6. Respect for Participants:

Researchers must treat participants with dignity and prioritize their well-being throughout the study.

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7. Plagiarism:

Plagiarism involves using someone else's published or unpublished ideas or intellectual property without attribution or permission and presenting it as original work.

Tools such as similarity checks are available to help researchers identify similarities between manuscripts, and such checks should be done before submission. While unintentional, plagiarism is still an ethical violation that can harm other researchers and the academic community[6].

Proper citation and giving credit to the original sources is essential to avoid plagiarism.

8. Risk-Benefit Analysis:

Researchers must evaluate whether the potential benefits of the study outweigh the risks to participants.

9. Data Manipulation:

Fabrication, falsification, or selective reporting of data must be avoided at all costs.

10. Ethical Data Handling:

Researchers must properly store and manage research data to protect participants' privacy.

11. Results Communication:

Research findings should be communicated accurately and transparently, including any limitations and potential biases.

12. Compensation:

Compensation for research participants may be monetary or non-monetary, including cash, vouchers, or gift cards. Payment plans should be fair and practical, ensuring that they do not compromise informed consent.

It's important to note that routine costs associated with participating in clinical trials can create barriers for economically disadvantaged individuals, so reimbursement for these expenses is essential[7].

It is the responsibility of the researcher to ensure that research is conducted ethically and responsibly, from planning to publication. Failing to adhere to ethical research standards undermines the credibility of the research and makes it difficult for others to trust the data, especially if the methods used are morally questionable[8].

Even when a research idea benefits society, it does not justify violating the rights or dignity of participants.

Before starting any study involving data collection from individuals, researchers must submit a research proposal to an Institutional Review Board (IRB).

An IRB is a committee that reviews whether the research aims and design are ethically acceptable and in line with the institution's code of conduct. The IRB ensures that the research materials and procedures comply with ethical standards.

If the proposal is approved, researchers may begin data collection according to the approved methods. Any changes to the procedures or materials must be submitted to the IRB for approval. If the proposal is not approved, the researcher may be asked to resubmit with modifications, or it may be rejected. To gain IRB approval, researchers must explicitly address how they will manage any ethical issues that may arise during the study.

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Original Article ***Open Access***

Dose Response Study on the Effect of Preoperative Dexamethasone on Postoperative Quality of Recovery after Outpatient Gynecological Laparoscopy

Abul Kalam Md. Jayed[1], Mohammed Mostafizur Rahman[2], Mushtaq Ahmad[3], Shamima Akter[4], Syed Tofael Ahmed[5]

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Abstract

Background: Quality of recovery is an important component of overall postoperative outcome measures and to ensure that glucocorticoids are usually given before ambulatory surgery. **Methodology:** This study was a prospective, randomized, double-blind placebo controlled trial among the female patients undergoing outpatient gynecological laparoscopy at CMH Dhaka from January 2021 to June 2021. **Results:** Global QoR-40 after dexamethasone 10 mg195 (150–200) was greater than dexamethasone 05 mg185 (130–195) ($p < 0.005$) or saline 172 (112–194) ($P<0.002$).QoR-40 scores on mental status, physical comfort and pain scales were significantly lower in the dexamethasone group. No differences in scores were observed between groups on the dimensions of psychological support and physical independence. Hospital stay time was decreased after dexamethasone 10 mg compared with saline. **Conclusion:** Dexamethasone demonstrated a dose-dependent effecton quality of recovery. Dexamethasone 10 mg provided better outcome than dexamethasone 05 mg and almost every aspects than saline.

Keywords: Quality of Recovery, Dexamethasone, Gynecological Laparoscopy, Outpatient

Introduction:

Laparoscopy is well established and commonly done in gynecology[1-2]. Laparoscopic surgery has multiple advantages particularly over major abdominal surgeries in terms of visualization, pain, blood loss and recovery[3-4]. Number of day cases and ambulatory surgery centers are increasing day by day, likely due to increased efficiency and reduced costs[5]. Expert surgeon with adequate resources can perform advanced laparoscopic major gynecological surgeries safely in hospitals or day care centers. Readmission rates are low and discharge rates are high in these cases[6-8]. Glucocorticoids are antiemetic, anti-inflammatory, analgesic, antipyretic and anti-allergic[9]. Glucocorticoids such as dexamethasone are commonly given in single doses preoperatively to ambulatory surgery patients because of its potency and long biological half-life of 36-72 hours[10]. Dexamethasone reduces emesis, postoperative pain, fatigue, airway problems and improve mood in different surgical patients[11-14]. Long-acting and potent dexamethasone may therefore reduce complications and improve outcomes after laparoscopic surgery[15]. Steroids have some harmful effects too[16]. Modern anesthetic management and minimally invasive procedures decreased morbidity and made early discharge possible[17], which is the main goal of ambulatory surgery. To make that possible quality of recovery should be assessed and studied after various interventions. I hypothesized that pre-operative single dose dexamethasone (05mg & 10mg) treatment will improve quality of recovery on postoperative day (POD) 1. This will be assessed using QoR-40 which is rational and valid for such assessment[18 22].

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Email: jayed1013@gmail.com, Mobile: 01769101490

Methodology:

This hospital based Prospective, Randomized, control trial was done in Combined Military Hospital (CMH) Dhaka from1 January 2021 to 30 June 2021. Female patients scheduled for gynecological laparoscopic surgery in combined military Hospital (CMH), Dhaka, within my study period, fulfilling the inclusion & exclusion criteria were enrolled for the study. Hundred and twenty female patients, scheduled for outpatient gynecological laparoscopy surgery under general anesthesia belonging to ASA class I and ASA class II were included in the study but through the pathway 24 were excluded and 96 patients were randomized and studied.. Patients were randomized using a random number table in to three groups: Group C (saline), Group D5 (dexamethasone 05 mg), Group D10 (dexamethasone10 mg). From induction to recovery all were followed with same procedures.Study participants were assessed at 1, 3, 24 h after the procedure and were asked about pain, sore throat,cough, hoarseness of voice, fever etc. Fitness for discharge from the PACU to home (i.e., awake and alert, minimal nausea and pain, stable vital signs with standing, ambulate without assistance, tolerate oral intake) was measured every 30 min. Patient management in the PACU reflected standard clinical practices. They were supplied with QoR-40 in bangla translated form which they filled up during hospital stay and after going home. The statistical analysis were performed by Statistical Package for Social Science (SPSS), version-22 for Windows (SPSS, Inc. Chicago, IL). The distribution of continuous variables were examined by Kolmogorov-Smirnov test. Normally distributed quantitative data (demographic variables) were evaluated using one way ANOVA. Non-normally distributed data were analyzed using Kruskal-Wallis H test. The ANOVA tests was followed by the post hoc Tukey`s method test. Data were expressed as mean values (mean ±SD) or median (Inter quartile range) or number (percentage). P-values of < 0.05 was considered as statistically significant.Categorical data were compared using Fisher exact test (NCSS, Kaysville, UT). The 95% CIs for the differences in percentages were calculated using the Farrington and Manning score. Ordinal data and continuous data that were not normally distributed are presented as median and range. These data were compared between groups using the Wilcoxon rank sum test and within groups using the Wilcoxon signed rank test (Stats Direct, Cheshire, United Kingdom). The median differences and their 99% CIs were calculated for the comparisons involving the primary outcome variables while the 95% CIs of all other median differences were calculated. Normally distributed continuous data are presented as mean ± SD. These data were compared using the unpaired t test (NCSS). Mean differences and their 95% CIs were calculated.To help minimize the chance of a type I error, the criterion for rejection of the null hypothesis was a two-tailed $P < 0.01$ for comparisons involving the primary outcome variable. A value of $P < 0.05$ was used for all other comparisons.

Result

Table I : Quality of Recovery (QoR-40) Dimensions and Global scores

QoR-40 Dimensions	Saline (n=24)	Dexamethasone 05 mg (n=27)	Dexamethasone 10 mg (n=24)	P-value
Emotional state	40 (25-45)	41(26-450	44 (29-45)	0.001
Physical comfort	46 (41-60)	55 (50-60)	59 (54-60)	<0.0001
Psychological support	34 (28-35)	34 (30-35)	35 (32-35)	0.35
Physical independence	21(6-25)	21 (13-25)	22 (15-25)	0.21
Pain	26 (16-34)	29 (19-35)	32 (22-35)	<0.001
Global QoR-40	172 (112-194)	185 (130-195)	195 (150-200)	<0.002

Data presented as median (range). Table I shows Global QoR-40 is significantly higher in Dexamethasone 10 mg group compared to saline group (<0.002), and compared to dexamethasone 05mg group (<0.005). QoR-40 scores in the dimensions of emotional state, physical comfort and pain were all significantly lower in dexamethasone group. No differences in scores were noted between the groups in the dimensions of psychological support and physical independence.

Table II Postoperative pain management (n=75)

	Saline (n=24)	Dexamethasone 05 mg (n=27)	Dexamethasone 10 mg (n=24	P-value
VAS for pain				
Post anaesthesia care unit admission	4(0-6)	4(1-7)	4(2-8)	0.30
30 min	5(2-7)	4(1-7)	3(0-5)	0.22
60 min	3(2-4)	3(1-4)	2(0-4)	0.30
Required opioid in post anaesthesia recovery room [n(%)]	19(79)	22(81)	16(67)	0.15
Time to first opioid administration (min)	20(10-50)	20(10-85)	40(15-75)	0.17

Data presented as median (range) or n (%). Table II shows VAS pain scores and opioid consumption in the first hour in the recovery room did not differ among groups. Cumulative opioid consumption by discharge was lower in the D10 (Dexamethasone 10mg) group compared with D05 (Dexamethasone 05 mg) and C (Saline) groups.

Table III: Postoperative parameters & side effects (n=75)

	Saline (n=24)	Dexamethasone 05 mg (n=27)	Dexamethasone 10 mg (n=24)	P-value
Nausea [n(%)]	14 (58)	10 (37)	6 (25)	0.005
Vomiting [n(%)]	9 (38)	6 (22)	1 (4)	0.002
Sore throat present (n)				
1 h	17	15	12	0.23
3 h	16	12	7	0.005
VAS for sore throat pain				
1 h	3 (2-5)	3 (2-4)	2 (0-4)	0.26
3 h				
Resting	3 (0-4)	1 (0-2)	0 (0-1)	0.007
Swallowing	4 (2-7)	1(0-2)	0 (0-1)	0.003
24 h				
Resting	4 (2-5)	2 (0-4)	1 (0-2)	0.003
Swallowing	5 (3-6)	3 (0-5)	0 (0-2)	0.001
Cough (none/minimal/moderate/severe)				
3 h	5/22/20/12	7/16/20/08	14/18/7/0	0.14
24 h	3/17/20/15	2/21/20/10	14/12/7	0.001
Hoarseness (none/previous/noted only by patient/easily noticed)				
3 h	3/6/10/18	9/10/12/2	20/5/6/5	0.0003
24 h	5/8/16/7	10/5/12/7	17/8/5/5	0.05
Level of fatigue (none/minimal/moderate/severe)				
3 h	1.5(0-3)	1.5(0-3)	1(0-1)	0.005
6 h	4 (2-5)	2 (0-4)	1 (0-2)	0.003

Data presented as median (range) or n (%). Table III shows presence and intensity of sore throat at 1 h was similar among groups but were less in the dexamethasone groups compared with saline at 3 and 24 h. but the incidence and severity was no different between dexamethasone groups. The severity of coughing among the groups was similar at 3 h, but less at 24 in the dexamethasone 10mg group compared with dexamethasone 05 mg group. Hoarseness was reduced in patient perceived severity in the dexamethasone 10 mg group compared with dexamethasone 05 mg and saline groups at 3 and 24 h. Level of fatigue was decreased in dexamethasone group at 3h and 24h.

Table IV Time to discharge (n=75)

	Saline (n=24)	Dexamethasone 05 mg (n=27)	Dexamethasone 10 mg (n=24)	P-value
First unassisted ambulation (min)	180 (60- 480)	150 (60- 420)	120 (45-380)	0.28
Time to meet discharge criteria (min)	180 (120-210)	135 (105-150)	130 (100-140)	0.004
Discharge time (min)	360 (320-400)	335 (310-360)	288 (255-315)	0.05
Pain medication consumption in the 24 h after discharge				
Ibuprofen (mg)	1600 (800-2000)	1200(800-2000)	1000 (800-1200)	0.51
Paracetamol (mg)	750 (500-1000)	750 (500-1000)	375 (0-1000)	0.02

Data presented as median (range) or n (%). Table IV shows time to meet discharge criteria was decreased after dexamethasone 10 mg compared with saline. Post discharge 24 h paracetamol consumption was less in the dexamethasone 10 mg group compared with dexamethasone 05mg and saline. Ibuprofen consumption did not differ among groups in the first 24 h.

Discussion:

Quality of recovery at 24h was better with dexamethasone 10 mg than dexamethasone 05 mg.It was better than saline too. Dexamethasone 10 mg showed better result in physical comfort, emotional domains compared with placebo but did not show any improvement on physical independence and psychological domain. They also had less airway problems at 24 h. Postoperative pain, opioid side effects and sore throat can delay discharge time[14,20]. Dexamethasone 10 and 05 mg both decreased sore throat and airway discomfort compared with saline at 3 h. But at 24 h airway morbidity were less in the dexamethasone 10 mg group than with both dexamethasone 05 mg and saline group. That shows extra benefit with this dose. Dexamethasone has dose dependant pain relief and opioid sparing effect that was shown in different studies like Wu and colleagues, Al-Qudah and colleagues, Jokela and colleagues and Haval and colleagues[23,26]. Along with above studies this study also showed decreased analgesic requirement and pain scores in POD 1. As a further evidence to analgesic properties of dexamethasone. Previously recovery was studied primarily on postoperative pain, nausea and vomiting[21]. But when we incorporate emotional and physical activity component it becomes more significant. Here the QoR-40 questionnaire was

used[19]. in case of postoperative recovery QoR-40 is valid, precise, and feasible and reliable[22]. therefore difference found with this questionnaire is more valuable. Improved quality of recovery and reduced emetic symptoms at 24 h was previously reported with dexamethasone 4 mg after ambulatory laparoscopic surgery[15]. Effects of on recovery may be due to mainly from its anti-emetic action. But dexamethasone 10 mg showed improvement nearly all domains of QoR 40 may be due to its analgesic and euphoric action along with anti- emesis. However Dexamethasone 10 mg did not show good results in physical independence scores. May be that will need higher doses which may be detrimental to health too. So findings of this study may have an impact on early discharge, patient comfort as well as may have an economic implication in ambulatory settings[27].

Conclusion:

In conclusion, 10mg of dexamethasone produced a better quality of recovery with less postoperative pain and better return to normal daily activities after outpatient gynaecological laparoscopic surgery when compared with 05 mg of dexamethasone and placebo.

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Conflict of interest:
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Authors' Contributions :
Jayed AKM, Rahman M conceived and designed the study, analyzed the data, interpreted the results, and wrote up the draft manuscript. Ahmad M, Akter S, Tofael A
were involved in the manuscript review and editing. All authors read and approved the final manuscript.

Data Availability :
Any inquiries regarding supporting data availability of this study should be directed to the corresponding author and are available from the corresponding author on reasonable request.

Ethics Approval and Consent to Participate
Ethical approval for the study was obtained from the Institutional Review Board. The written informed consent was obtained from all study participants. All methods were performed in accordance with the relevant guidelines and regulations.

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Original Article ***Open Access***

Assessing the Knowledge about Symptoms of Carcinoma Cervix among Women of Reproductive Age Group

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Abstract

Background: Cervical cancer is one the of main reasons for the death of women's in the world. It is a major public health problem and it is the second most common cancer in women worldwide which is the leading cause of deaths of women in developing countries. Women are unaware of risk factors, symptoms, screening facilities and treatment options are associated with cervical cancer. Proper knowledge about the early warning signs and concerned them about its curability if diagnosed in early stage could have a major impact. **Objective:** To assess the level of knowledge about symptoms of carcinoma cervix among women of reproductive age group. **Methods:** This was a Descriptive type of cross-sectional study. It was conducted from May 2024 to August 2024. Data were collected using self-administered structured questionnaire consisting of information about socio-demographic data, information about personal history and knowledge about the symptoms of carcinoma cervix. The data were processed by computer and statistical analysis of data was carried out by using SPSS (Statistical Package for Social Science). A total of 100 participants participated in the study. **Result:** Result showed that among 100 respondents' majority 23% were 30-34 years old. Most of the respondents were Muslim 88%. 49% respondents were unmarried and majority 46% respondents had no child. More than half 53% respondents did not use contraceptive in their life. 25% participants had the knowledge that persistent per vaginal foul-smelling discharge is the symptom of cervical cancer. 27% respondents mentioned that menstrual period heavier or longer than usual is the signal of carcinoma cervix. 23% agreed irregular menstruation and 16% mentioned post coital bleeding as the symptom of cervical cancer. 22% respondents notify that persistent low back pain or pelvic pain could be the reason of cervical cancer. 17% knew that vaginal bleeding after menopause is the symptom of carcinoma cervix. 18% respondents of reproductive age group had the knowledge of unexplained weight loss as one of the symptoms of carcinoma cervix. **Conclusion:** The cervical canceris a deadly cancer that clutches lives of the women in most of the cases due to lack of consciousness. Unfortunately, the cervical cancer is the second leading cause of deaths in cancer in Bangladesh. An important aspect of cervical cancer prevention is public awareness in the female population. January is declared as the cervical health awareness month, nationwide effort to encourage on cervical health awareness can make it possible to get rid of the burden of cervical cancer disease.

Key words: Knowledge, symptoms, carcinoma cervix, reproductive age

Introduction:

Cervical Cancer is the fourth most common cancer in women, ranking after breast cancer (2.1 million cases), colorectal cancer (0.8 million) and lung cancer (0.7 million)[1]. While Cervical Cancer cases are declining in the developed world, they pose a heavy burden on developing countries, where the risk of developing Cervical Cancer is 35% greater compared to developed countries[2].

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There is evidence that raising awareness of cancer symptoms and signs might increase people's ability **to** detect early symptoms and signs of cancer[3]. In the United Kingdom (UK), knowledge and understanding of cancer risk factors and outcomes of cancer treatments influenced individuals' intentions and actual participation in cancer prevention programmes[4]. In addition, better knowledge of cancer warning signs has also been linked with early help-seeking[5]. Regarding cervical cancer, a substantial body of research has shown that awareness of cervical cancer and knowledge of its risk factors and symptoms can increase uptake of cervical screening and encourage early help-seeking for symptoms suggestive of cervical cancer[6]. cervical cancer is most frequently diagnosed in women between the ages of 35 and 44, with the average age being 50. It rarely develops in women younger than 20.Several factors related to reproductive age (15-49 years) can influence the risk of developing cervical cancer[7]. Cervical Cancer can be cured, because it has a long pre-invasive period. Early diagnosis and treatment of Cervical Cancer at women are crucial for reducing mortality rates[8].

Materials and Methods:

This was a descriptive type of cross-sectional study regarding Knowledge about the symptoms of carcinoma cervix among women of reproductive age group. It was conducted from May 2024 to August 2024. The study was carried out among the respondents of Novelty School and College, Dhaka. Study population were female teachers, female staffs and female students of reproductive age group. A total of 100 respondents were selected. Data were collected using self-administered structured questionnaire consisting of information about socio-demographic data, information about personal history of respondents and knowledge about the symptoms of cervical cancer. After collection of data it was checked, verified and edited to reduce inconsistency. The data were processed by computer and statistical analysis of data was carried out by using SPSS (Statistical Package for Social Science).

Result

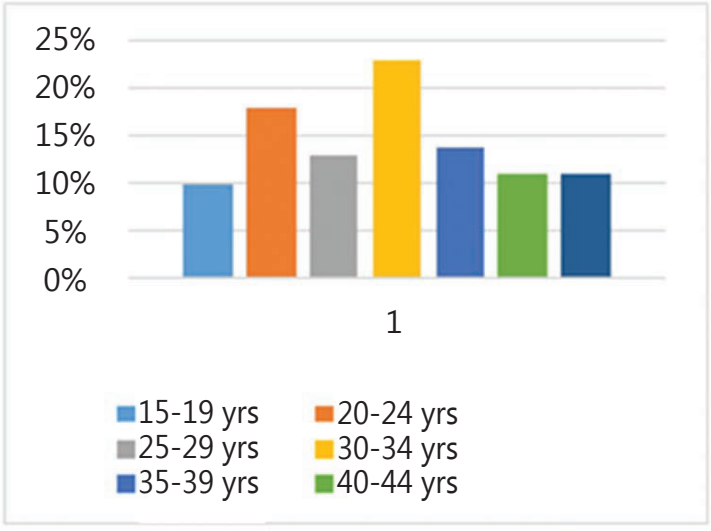

Figure-1: Distribution of respondents by age group (n=100)

Figure-1 shows that among the total 100 respondents, the majority 23 (23%%) were 30-34 years old.

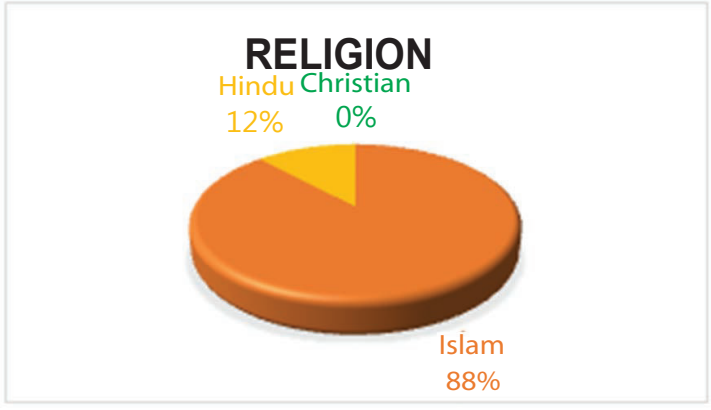

Figure-2: Distribution of respondents by religion(n=100)

Figure-2 shows that among the total 100 respondents most of them were Muslim 88%

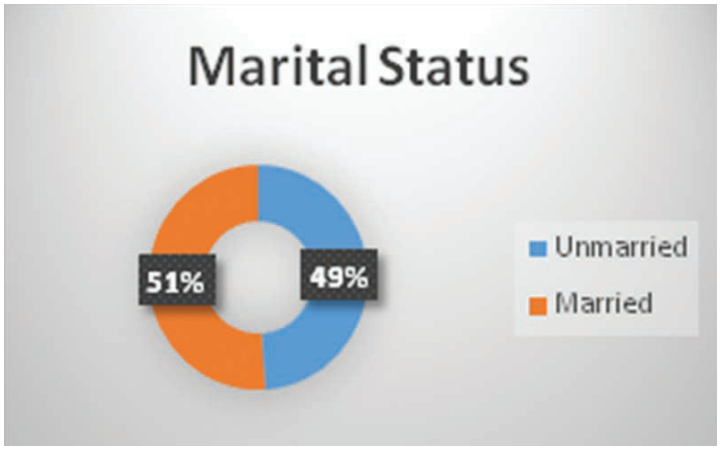

Figure-3: Distribution of respondents according to marital status (n=100)

Figure-3 shows that more than half of the participants were married 51%.

Table-1: Distribution of respondents according to their duration of marital life

Duration marital life	Frequency	Percent
Married for less than 10 years	31	31
Married for 10 years & above	20	20
Unmarried	49	49
Divorced/Widow	0	0
Total	**100**	**100**

Table-1 shows that among the 100 respondents, majority 49% were unmarried and 20% women were married for 10 years and above.

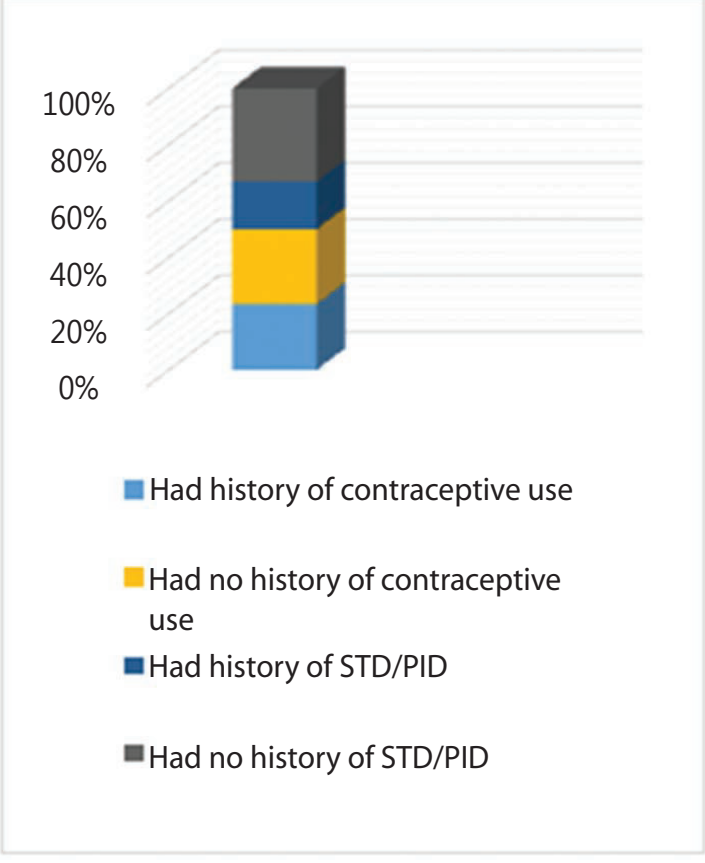

Figure-4: Distribution of respondents by history of contraceptive use, history of STD/PID (n=100)

Figure-4 shows that more than half 53% respondents did not use contraceptive in their life and 66% respondents had no STD/PID.

Table-2: Distribution of respondents according to knowledge about symptoms of cervical cancer

Symptoms	Yes n (%)	No n (%)	Total
Intermenstrual bleeding	26(26%)	74(74%)	100(100%)
Persistent per vaginal foul-smelling discharge	25(25%)	75(75%)	100(100%)
Irregular menstruation	23(23%)	77(77%)	100(100%)
Menstrual period heavier/longer than usual	27(27%)	73(73%)	100(100%)
Post coital bleeding	16(16%)	84(84%)	100(100%)
Persistent low back pain/pelvic pain	22(22%)	78(78%)	100(100%)
Post-menopausal bleeding	17(17%)	83(83%)	100(100%)
Unexplained weight loss	18(18%)	82(82%)	100(100%)

Table-2 shows that among 100 respondents, 26% mentioned intermenstrual bleeding, 23% agrees irregular menstruation, 16% knew post-coital bleeding and 17% respondents had the knowledge that post-menopausal bleeding as symptoms of carcinoma cervix.

Discussion:

In this cross-sectional study, all of the respondents gave average feedback about the knowledge of the symptoms of cervical cancer. In this study, participants were from reproductive age group (15-49 years). Among 100 respondent majority 23% were 30-34 years old which is similar to the findings of another study done in Dhaka where highest proportion 35% of women belonged to the age group 31- 34 years[9]. 88% respondents were

Muslim. More than half of the participants 51% were unmarried. 53% respondents had no history of contraceptive use and 66% had no history of STD/PID. Among 100 respondents, 23% knew that irregular menstruation is one of the symptoms of cervical cancer. 26% agreed that intermenstrual bleeding and 25% mentioned that persistent per vaginal foul-smelling discharge is the common symptom of carcinoma cervix which findings is very close to another study done in India where inter menstrual bleeding and foul-smelling discharge was the most common symptom reported in 30% and 28% women respectively[10]. 17% respondents had knowledge that post-menopausal bleeding could be the cause of cervical cancer. 18% participants had knowledge that unexplained weight loss is one of the signals of carcinoma cervix. Public health campaigns can significantly contribute to raise the knowledge about carcinoma cervix. The outcomes of this study might be helpful for the implementation of future health program to increase awareness among the women of our society.

Conclusion:

It is important to reduce the misconceptions or lack of knowledge about the symptoms of cervical cancer which is similar to the symptoms of other disease of reproductive organ. Public health program about cervical cancer including its existence, risk factors, symptoms, screening and vaccination should be conducted widely by social media and community-based health education program must be involved.

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Authors' Contributions :

Akhter E, Chowdhury NS conceived and designed the study, analyzed the data, interpreted the results, and wrote up the draft manuscript. Jahan H,Chowdhury NN were involved in the manuscript review and editing. All authors read and approved the final manuscript.

Data Availability :

Any inquiries regarding supporting data availability of this study should be directed to the corresponding author and are available from the corresponding author on reasonable request.

Ethics Approval and Consent to Participate

Ethical approval for the study was obtained from the Institutional Review Board. The written informed consent was obtained from all study participants. All methods were performed in accordance with the relevant guidelines and regulations.

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Original Article ***Open Access***

Morphometric Study of Dry, Fully Ossified Left First Ribs in a Bangladeshi Population

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Abstract

Background: First rib is strongest, flattest, most curved of all ribs, and is the shortest of the true ribs. It forms the boundary of the thoracic inlet. The anatomical knowledge of first rib is essential in anthropological and medico-legal practices. Measurements can be used to accurately establish race, ethnicity, age and gender. Considering the remarkable anatomical, anthropological, clinical and medico-legal importance of first rib, the present study was conducted to collect morphometric data from dry fully ossified left first rib. **Objectives:** The present study was designed to determine different morphometry of dry fully ossified left first rib. **Methods:** This was an analytical cross-sectional study which was carried out in the Department of Anatomy at Dhaka Medical College, Dhaka, Bangladesh from July 2022 to June 2023. A total of 100 dry fully ossified left first ribs were collected from medical students and departments of Dhaka Medical College, Dhaka. **Results:** In the present study, statistically significant differences ($p< 0.01$) were found between male and female in the actual internal length of left first rib, actual external length of left first rib. Scalene tubercle was prominent in 72.73% of males and 60.11% of females ; rudimentary in 27.27% of males and 40% of females. Vascular groove present was 72.73% cases, 47.27% cases in male and female. Vascular groove absent was 47.27% cases, 47.22% in male and female. Conclusion: The present study was an attempt to produce a morphometric data on different variables of dry fully ossified left first rib. This study was an attempt to construct baseline data on various dimension of dry fully ossified left first rib. The racial, socioeconomical and regional factors are effective to have a bearing on the morphological features of the left first ribs.

Keywords: Thoracic rib, atypical rib, true rib, false rib

Introduction

Ribs are elongated, curved, flat bones that form the largest part of thoracic cage[1]. Rib is protective. They are ribbon-like structures that protect the thoracic organs[2]. Each rib consists of two plates of compact bone with intervening spongy bone and marrow. The first seven pairs of ribs are true ribs because they articulate posteriorly to the vertebral column and anteriorly to the sternum by costal cartilages. The lower five pairs of ribs are false ribs[3]. The rib provides the mechanical role of protecting and supporting internal organs and stabilizing the trunk during respiration and spinal flexion[4]. The first rib has a head, neck, tubercle, shaft and sternal end. The shaft is flat and presents superior and inferior surfaces, outer and inner borders. The superior surface is crossed by two shallow oblique grooves separated by a faint ridge which presents a small projection called the scalene tubercle, near to the inner border. The scalene tubercle receives the attachment of the scalenus anterior. The anterior groove lodges the subclavian vein, and the posterior groove is

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occupied by the subclavian artery and usually the lower trunk of the brachial plexus behind the artery. The outer border is convex, thick posteriorly and thin anteriorly. The internal border is thin and concave. The suprapleural membrane is attached to the internal border. The suprapleural membrane covers the cervical dome of the pleura[5]. The value of the normal dimension of the first rib is useful for the Anatomists and Anthropologists for normative reference. Observation and morphometric measurements of the first rib is essential in Radiology, surgical procedures and medico-legal practices. The aim of the present study is to provide additional information to the present limited data on morphological variations of the first rib with its clinical importance.

Methodology

Study Settings and Population: The cross sectional analytical study was conducted in the Department of Anatomy, Dhaka Medical College, Dhaka Bangladesh. The study was conducted over a one year periods,from July 2022 to June 2023. A total of 100 (one hundred) dry fully ossified left first ribs were analyzed. Out of one hundred left first rib, 55 (fifty-five) was male and 45 (forty-five) was female.

Study Procedure: It was Purposive, convenient sampling technique. The sample was collected from the students of Department of Anatomy, Dhaka Medical College, Dhaka, Bangladesh. The study was conducted Dry fully ossified left first rib of unknown sex were included in this study. Broken left first rib or part of the bone is missing, fracture of left first rib, any deformity of the left first rib or any degenerative changes of the left first rib were excluded from this study.

Statistical Analysis: The data collected from morphological studies were processed to obtain mean values, standard deviations and percentage values as applicable. The statistical analysis was performed using the unpaired Student's t- test to compare variables, utilizing computer based software, Statistical Package for the Social Sciences (SPSS) + version 27.0. Statistical analysis was accepted as significant at A p-value equivalent to of less than or equal to 0.05 ($p<0.05$) was considered statistically significant.

Ethical Clearance: The study was carried out after approval of the Research Review Committee (RRC) and the Ethical Review Committee (ERC) of Dhaka Medical College.

Results

The present study was conducted on 100 (one hundred) dry fully ossified human left first ribs. Out of 100 (one hundred) left first ribs, 55 (fifty-five) were male and 45 (forty-five) were female. After the collection of data, statistical analysis was done by the software, SPSS (Statistical Package for Social Sciences) for Windows, Version 27.0. Observations and results of this study were described with suitable tables and graphs.

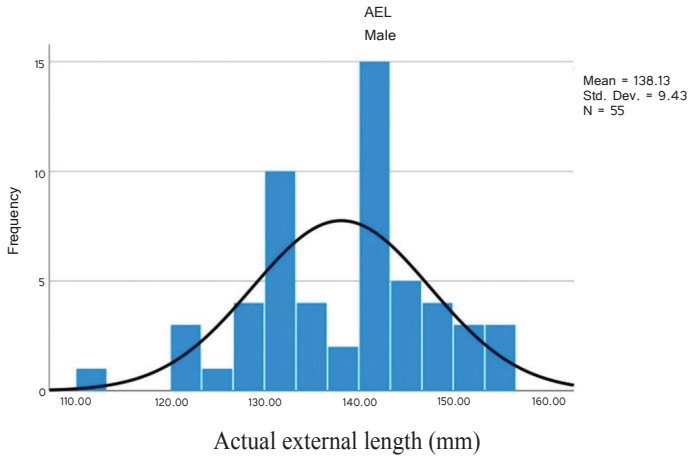


Figure I: Frequency Curve of Variable (Actual External Length)

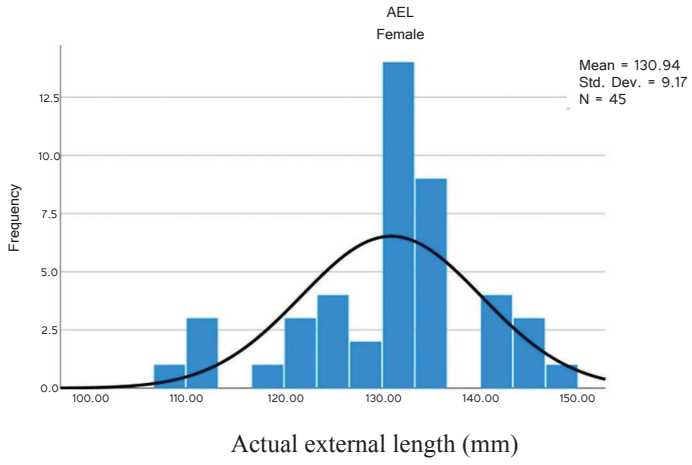


Figure II: Frequency Curve of Variable (Actual external length)

Actual internal and external length of left first rib between male and female (Table III): The mean ± SD of actual internal length of left first rib was recorded 93.83

± 3.20 mm in male and 77.83 ± 6.53 mm in female. The range of actual internal length of left first rib was from 85.13 to 100.14 mm in male and from 57.58 to 87.12 mm in female. The length of the first rib was significantly greater in males than females ($p < 0.01$). The mean ± SD of actual external length of left first rib was recorded 139.04 ± 11.03 mm in male and 131.60 ± 10.54 mm in female. The range of actual external length of left first rib was from 111.13 to 155.11 mm in male and from 107.23 to 147.12 mm in female. The length of left first rib in male was greater than female and it was statistically significant ($p < 0.01$).

Table 1: Actual internal and external length of left first rib between male and female (Mean ± SD)

Variables	Male n=55	Female n=45	P value
Actual internal length (mm)	93.83 ± 3.20 (85.13 – 100.14)	77.83 ± 6.53 57.58 – 87.12)	0.000**
Actual external length (mm)	139.04 ± 11.03 (111.13– 155.11)	131.60 ± 10.54 (107.23 – 147.12)	0.000**

Figures in parentheses indicate range; Comparison of values between male and female was done by Unpaired Student's 't' test; ** = Significant at $p < 0.01$; N = Total number of sample; n = Sample size in each group; SD = Standard Deviation

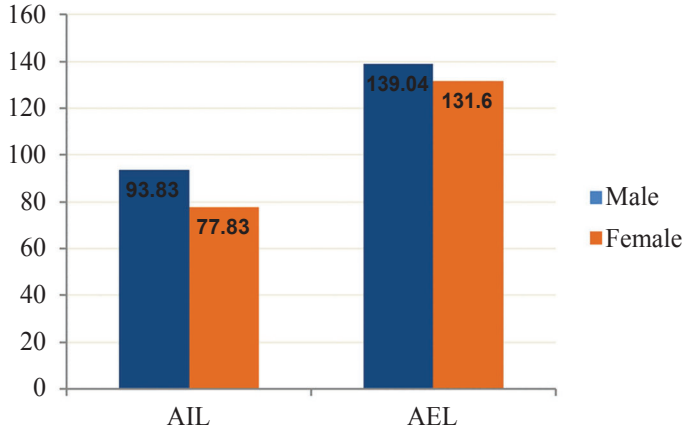


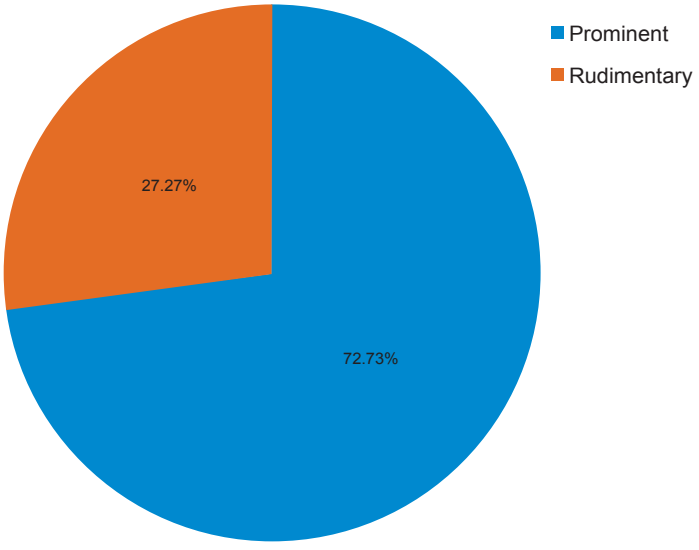
Figure 3: The bar diagram showing actual internal length (left side) and actual external length of left first rib in male and female (right side) (AIL: Actual internal length; AEL: Actual external length; measurement in mm (mean ± SD)

Table 2: Variation of scalene tubercle of left first rib in male and female (N=100)

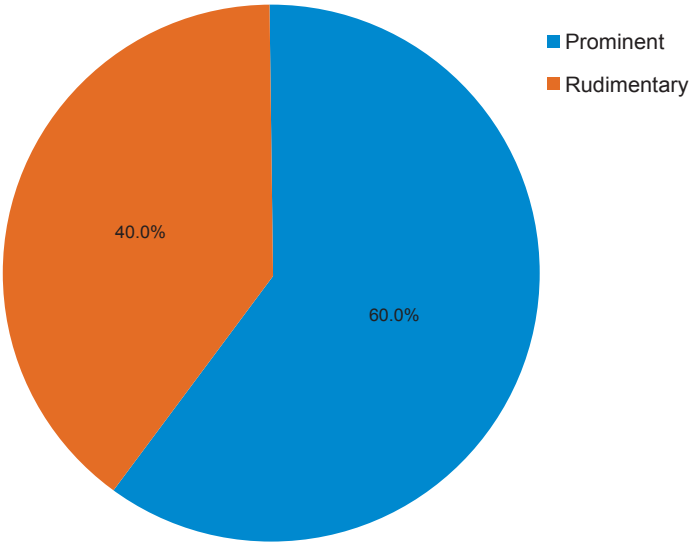
Gender	Prominent	Rudimentary
Male	72.73%	27.27%
Female	60.11%	40.0%

Table 3: Variation of vascular groove of left first rib in male and female (N=100)

Gender	Present	Absent
Male	72.73%	33.33%
Female	47.27%	42.22%



Variation of scalene tubercle in male



Variation of scalene tubercle in female

Figure IV: The pie chart showing variation of scalene tubercle in male and female

Discussion

First rib studies have been conducted on radiological

grounds as well as by inspection of dry bones. The mean ± SD of actual internal length was 84 ± 11.7 mm of left sided first rib on Indian Population. The findings of this study was lower to the present study. The dissimilarities might be due to variations in nutrition [6]. The mean ± SD of actual internal length was 89.31± 7.28 mm in Europian American male and 88.89 ± 7.32 mm in African American male. The mean ± SD of actual internal length was 86.83 ± 8.32 mm in Europian American female and 86.47mm in African American female. The findings of this study were lower in male and higher in female. The dissimilarities might be due to variations in race [7]. The mean ± SD of actual internal length was 95.14± 8.88 mm in male and 85.87 ± 7.53 mm in female. The findings of the previous study were higher than those observed in the present study. These differences may be attributed to racial variations. The dissimilarities might be due to variations in race [8]. The mean ± SD of actual internal length of left first rib was recorded 93.83 ± 3.20 mm in male and 77.83 ± 6.53 mm in female. The length of left first rib in male was greater than female and it was statistically significant ($p < 0.01$). The mean ± SD of actual external length was 128 ± 16.7 mm of left sided first rib. The findings of this study was lower to the present study. It might be due to variation in profession[6]. The mean actual external length of left first rib was almost similar with the findings of study in which the mean actual external length of left first rib in male was141.80 mm and female was 127.18mm. The values of length were found higher to the present study. It might be due to variation in race[9]. The mean ± SD of actual external length of left first rib was recorded 139.04 ± 11.03 mm in male and 131.60 ± 10.54 mm in female. The length of left first rib in male was greater than female. There was significant statistical difference ($p < 0.01$) between mean ± SD actual external length of left first rib in male and female. Scalene tubercle was 20% first rib. In present study, scalene tubercle was prominent (72.73% and 60.11%) and rudimentary (27.27% and 40%) of male and female respectively . But the findings of the present study were higher to that of, who collected left first ribs from Indian population in Chenni state and reported prominent 61.25% and rudimentary scalene tubercle was 23.33% first rib [10]. According to their result, absence of vascular groove was 28% first rib. In present study, vascular groove was present (87.57% and 80.36%) and absent (12.43% and 19.64%) of male and female respectively .But the findings of the present study, present vascular groove was lower and absent vascular groove was higher to that of ,who collected left first rib from Chenni state and reported 88.75% presence and 11.25% absence of vascular groove of first rib, [10]. The value of all variables of left first rib such as actual internal and external length, shortest internal and external length and depth of the arc were higher in male than female and it was statistically significant ($p<0.01$).

Conclusion

The value of all variables of left first rib such as actual internal and external length, shortest internal and external length and depth of the arc were higher in male than female and it was statistically significant ($p<0.01$). Racial, socioeconomic and regional factors may influence the morphological features of the left first ribs. Further research conducted in this, will help to establish a more concrete association between race and rib characteristics.

Acknowledgments

None

Conflict of Interest

No conflict of interest.

Financial Disclosure

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Authors' Contributions

Laboni TK conceived and designed the study, analyzed the data, and interpreted the results. Uddin M and Afrin S wrote up the draft manuscript. Hossain A, Shima N, Rabeya T and Moin S involved in the manuscript review and editing. All authors read and approved the final manuscript.

Data Availability

For any inquiries concerning the availability of the study's supporting data, which are provided upon reasonable request, feel free to contact the corresponding author.

Ethics Approval and Consent to Participate

The Institutional Review Board granted the study ethical approval. Every study respondent provided written informed permission. All work was carried out following the applicable rules and regulations.

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Original Article ***Open Access***

Pattern of Acute Poisoning cases admitted in a District Teaching Hospital

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Abstract

Background: Every unnatural death represents a tragic waste of precious human life and resources. Death due to poisoning is no exception. Self destruction or suicide by pesticide poisoning is a burning problem of Bangladesh. **Objective:** The objective of this study was to find out the incidences and pattern of poisoning among admitted cases in a peripheral district teaching hospital, also different aspects of poisoning along with demographic pattern, social factors and other related perimeter and modalities to prevent loss of precious life due to poisoning. **Methodology:** This retrospective cross-sectional study was conducted among victims of poisoning admitted at the Jashore Medical College and Hospital, during the period of February 2024 to September 2024. The study population included 98 patients of both genders admitted in Medicine wards with history of poisoning who were more than 12 years of age. Informed consent were taken from them, the aim of the study was explained clearly and their detailed history was collected in a prescribed data sheet. Data was analyzed and tabulated systematically with help of SPSS-28. **Results:** Among the data providers 66 (67.35%) were male and 32(32.65%) were female. Most of them 77(78.57%) resided in rural area, maximum people were Muslim 92(90.16%). Majority of the victims were students 33(33.67%), followed by house wife 25(25.51%) and farmers 23(23.48%). Most of the patients 71(72.45%) completed secondary education. Poisoning were predominant in unmarried populations 52(53.06%). Monthly income of majority 45(45.92%) were between 20,001- 30,000 taka. Maximum patients belonged to the age group 26-35 years 39(39.80%). Most of the poisoning cases were suicidal 55(56.12%). Insecticides (OPC) 29(29.59%) were the commonest agent of poisoning. Familial disharmony/domestic problems 44(44.90%) was the commonest causes of poisoning. Other causes included Failure in love affairs 19(19.38%), Study and exam related causes 14(14.28%), Sexual abuse 7(7.14%) etc. **Conclusions:** Trends have been changed in poisoning in our country. Improvement of socioeconomic condition, law & order situation, level of education, removal of oppression, people's attitude and knowledge about poisoning are essential for reducing the incidence of poisoning. We need to plan a comprehensive strategy considering the factors related with poisoning events.

Key Words: Poisoning, admitted patient, Teaching hospital

Introduction

The pattern of poisoning varies from country to country and region to region depending on factors like geography, availability or accessibility of poison, socioeconomic conditions, cultural and religious influences[1]. The pathology of poisoning depends on the route of exposure and absorption of the poison into the body. Most cases of household poisoning occur through oral ingestion leading to corrosive effects in the alimentary system along with systemic toxicity[2]. Among the thousands of harmless products available as

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household, very few are hazardous. Still, poisoning with these substances is one of the common modes of poisoning all around the world as well as in South Asia[3]. Bangladesh is a developing country where rural population is mostly dependant on agriculture. Pesticides act as a common agent for suicidal purpose after trivial family problems and in developing countries kill around 3,00,000 people each year[4-6]. Suicidal death in industrialized countries are also caused by pesticide ingestion[5,6]. Poisoning cases can also occur accidentally and rarely as homicidal purpose. Accidental poisoning occurs in manufacturers, users, children of users, packers, sprayers and due to contamination of food grains mixed with insecticides preserved for seedling purposes. Poisoning also occurs from fruits and vegetables[7]. According to the World Health Organization, 99% of the fatal poisoning cases occurred in developing countries[8]. Acute poisoning is a common medical emergency in Bangladesh. It is the seventh commonest cause of in-hospital mortality in Bangladesh[9].

Objective

The objective of this study was to find out the incidences and pattern of poisoning among admitted cases in a peripheral district teaching hospital, also different aspects of poisoning along with demographic pattern, social factors and other related perimeter and modalities to prevent loss of precious life due to poisoning.

Materials and Methods

This retrospective cross-sectional study was conducted among victims of poisoning admitted at the Jashore Medical College and Hospital, Jashore during the period of February 2024 to September 2024. The study population included 98 patients of both genders admitted in Medicine wards with history of poisoning who were more than 12 years of age. Informed consent were taken from them, the aim of the study was explained clearly and their detailed history was taken.Those who were unwilling to give informed consent, food poisoning, snake bite, drug reaction cases were excluded from this study. All the data was collected in a prescribed data sheet. Data was analyzed and tabulated systematically with help of SPSS-28.

Result

Among the data providers 66 (67.35%) were male and 32(32.65%) were female. Most of them 77(78.57%) resided in rural area. Considering religion, maximum people were Muslim 92(90.16%). Majority of the victims were students 33(33.67%), followed by house wife 25(25.51%) and farmers 23(23.48%). Most of the patients 71(72.45%) completed secondary education. Poisoning were predominant in unmarried populations 52(53.06%). Monthly income of majority 45(45.92%) are between 20,001- 30,000 taka .(Table-1)

Table-1
Distribution of patients as per demographic characteristics. (n= 98)

Demographic characters		Total	Male	Female
Sex		98(100%)	66(67.35%)	32(32.65%)
Religion	Muslim	92(90.16%)	62(67.39%)	30(32.61%)
	Hindu	4(39.2%)	3(75%)	1(25%)
	Christian	1(0.98%)	1(0.98%)	0
	Buddhist	1(0.98%)	1(0.98%)	0
Resident/ habitat	Rural area	77(78.57%)	52(67.53%)	25(32.47%)
	Urban habitat	21(21.43%)	14(66.67%)	7(33.33%)
Marital status	Married	46(46.94%)	31(67.39%)	15(32.61%)
	Unmarried	52(53.06%)	35(67.31%)	17(32.69%)
Education	Primary	10(10.20%)	7(70%)	3(3%)
	Secondary	71(72.45%)	48(67.61%)	23(32.39%)
	Higher secondary	11(11.23%)	8(72.73%)	3(27.27%)
	Graduate	6(.6.12%)	4(66.67%)	2(33.33%)
Occupation	Student	33(33.67%)	21(63.64%)	12(33.34%)
	House wife	25(25.51%)	16(64%)	9(37%)
	Farmer	23(23.48%)	15(65.21%)	8(34.79%)
	Business	6(6.12%)	4(66.66%)	2(33.34%)
	Service provider	5(5.10%)	3(60%)	2(40%)
	Unemployed	4(4.08%)	3(75%)	1(25%)
	Others	2(2.04%)	1(50%)	1(50%)
Monthly Income in Taka	Below 10,000	11(11.22%)	7(63.63%)	4(36.37%)
	10,001-20,000	21(21.43%)	15(71.43%)	6(28.57%)
	20,001-30,000	45(45.92%)	31(68.89%)	14(31.11%)
	30,001-40,000	12(12.25%)	9(75%)	3(25%)
	More than 40,000	9(9.18%)	6(66.66%)	3(33.34%)

Considering age factors maximum patients belonged to the age group 26-35 years 39(39.80%), followed by 36-45 years 32(32.79%) and 12-25 years 12(12.24%). (Table-2)

Table-2
Distribution of patients as per age variation. (n= 98)

As per age variation	Total	Male	Female
Total	98(100%)	66(67.35%)	32(32.65%)
12-25yrs	12(12.24%)	7(58.33%)	5(41.67%)
26-35yrs	39((39.80%)	27(69.23%)	12(30.77%)
36-45	32(32.79%)	21(85.62%)	11(34.38%)
46-55yrs	9(8.97%)	6(66.67%)	3(33.33%)
Above 55 yrs	6(6.22%)	5(83.33%)	1(16.67%)

Most of the poisoning cases were suicidal 55(56.12%), followed by accidental 31(31.63%) and road poisoning 12(12.24%). Male populations were more affected than female. (Table-3)

Table-3
Distribution of patients as per mode of poisoning. (n= 98)

Mode of poisoning	Total	Male	Female
Total	98(100%)	66(67.35%)	32(32.65%)
Suicidal	55(56.12%)	37(67.27%)	18(32.73%)
Accidental	31(31.63%)	21(67.74%)	10(32.26%)
Road poisoning during travel	12(12.24%)	8(66.67%)	4(33.33%)

Insecticides (OPC) 29(29.59%) were the commonest agent of poisoning, followed by Sedatives/ benzodiazepine 23(23.47%), Travel related poisons 12 (12.24%), Anti depressant 9(9.18%), Alcohol 7 (7.14%), house hold items like Phenol/ Harpic 5(5.10%), Rat killer5 (5.10%) etc. (Table-4)

Table-4
Distribution of patients as per types of poisoning material. (n= 98)

Poisoning materials	Total	Male	Female
Total	98(100%)	66(67.35%)	32(32.65%)
Insecticides (OPC)	29(29.59%)	21(72.41%)	8(27.59%)
Sedatives/ benzodiazepine	23(23.47%)	14(60.86%)	9(39.14%)
Travel related poisons	12(12.24%)	9(75%)	3(25%)
Anti depressant	9(9.18%)	4(36.36%)	5(55.54%)
Alcohol	7(7.14%)	6(85.72%)	1(14.28%)
Phenol/ Harpic	5(5.10%)	3(60.00%)	2(40.00%)
Rat killer	5(5.10%)	3(60.00%)	2(40.00%)
Savlon, Dettol	3(3.06%)	2(66.67%)	1(33.33%)
Paracetamol	3(3.06%)	2(66.67%)	1(33.33%)
CuSO4	2(2.04%)	1(50.00%)	1(50.00%)

Familial disharmony/ domestic problems44(44.90%) was the commonest causes of poisoning. Other causes included Failure in love affairs 19(19.38%), Study and exam related causes 14(14.28%), Sexual abuse 7(7.14%), Job / business/ income dissatisfaction 5(5.10%) etc. (Table-5)

Table-5
Distribution of patients as per suspected causes of poisoning. (n= 98)

Suspected causes of poisoning	Total	Male	Female
Total	98(100%)	66(67.35%)	32(32.65%)
Familial disharmony/ domestic problems	44(44.90%)	35(79.54%)	9(20.46%)
Failure in love affairs	19(19.38%)	11(57.89%)	8(42.11%)
Study and exam related causes	14(14.28%)	10(71.42%)	4(28.57%)
Job / business/ income dissatisfaction	5(5.10%)	4(80%)	1((20%)
Sexual abuse	7(7.14%)	0	7(100%)
Chronic illness	4(4.08%)	3(75%)	1(25%)
Unknown	5(5.10%)	3(60%)	2(40%)

Discussion

In this study, young people 39(39.80%) were predominantly affected. This result is consistent with the study by Dewan G et al[10] and Dr. Mohammad Abul Bari[11]. Almost all the study showed, the incidence was maximum from 2nd to 4th decade. Mild variation of percentage among young was observed by Mohammad Rafiqul Islam et al[12] that showed 38.71% in 21 to 30-years and 33.22% in 11 to 20-years of age group. Male gender is more (67.35%) in this study with male to female ratio was approximately 3:2. male dominated gender distribution was observed in the study by Howlader MAR et al[13] and Hossain AKMM et al [14] .

The result does not consistent with the study by SM Hossain et al[15] in Khulna, in which 37% were male and 63% were female. On the other hand, the study in Dhaka Medical College Hospital (DMCH), by

Mohammad Rafiqul Islam et al[12] showed male to female ratio was almost equal (1: 0.9). Jashore is an agricultural hub of this region. Most of the male population are busy with agricultural activities and business. Gender distribution may be variable in different geographical location.

Suicide is a major public health concern in Bangladesh. Same scenario was observed in our study, in which suicidal attempt was the commonest 55(56.12%) mode of poisoning. Mohammad Rafiqul Islam et al[12] showed the main mode of poisoning was suicidal (62.25 %,) and that was consistent with present study. Very alarming result was observed in the study by G. K. Acherjya et al[16] in which almost all (97.3%) had the suicidal mode. In this study suicidal attempt was conducted by pesticides (OPC, Carbamates, Rodenticide), sedative/ benzodiazepine, anti depressant, alcohol, phenol/ harpic/ savlon etc. Among all types of poison pesticides were the commonest 29(29.59%) and all was used as suicidal mode. Pesticides may easy to use for poisoning purpose especially in villages as because those are the most commonly used for agriculture purpose. This is available in farmers home and enough precaution is not followed about its preservation.

A study by Shadequlslam AHM et al[17] showed in different parts of Bangladesh, pesticides have been responsible for poisoning in great number of patients admitted to hospitals. Similarly Dewan G[10] described pesticide poisoning accounted for 39.1% of total poisoning cases admitted in different levels of hospitals. This was consistent with our study. Different studies in Rajshahi and Rangpur Medical College Hospitals were conducted in different times, which showed OPC is the commonest mode of poisoning with 3.96% of total poisoning in Rangpur and 4.3% in Rajshahi. Seventy four percent were with suicidal intention in Rajshahi Medical College Hospital[18-22]. In Sri Lanka available information on hospital admission due to poisoning for the period 1980- 1989 shown all poisoning ranged 154-200/ 1,00,000 population, while those due to pesticide poisoning varied between 80-108/ 1,00,000 population[23].

In this study street poisoning as stupefying mode was observed in third highest 12(12.24%) in number. Recently human mobilization is marked especially due to education and professional purpose as well as improvement of vehicle facilities. That's why travel related occurrences are increasing. Street or travel related poisoning as second highest (27%) was observed in Rabiul Hossain et al[24] and (16.03%) by Chowdhury FR et al[25]. On the other hand Mohammad Rafiqul Islam et al[12] showed the most common poisoning agents were commuter poisoning. As the study was conducted in Dhaka city; human mobilization is significant in there. G. K. Acherjya et al[16] showed travel related poisoning was 1.6% Food like dub water, soft drinks, tea, coffee, jhal muri and traditional medicine for instant pain relief, cough & asthma relief by hawker physician in the vehicles, are used as media of poisoning for the purpose of pick pocket[26]. In all the study victims were male and precipitated by careless behavior during travel. Food or drinks was offered by unknown near passenger or hawker in vehicles or vehicles stand with a very sympathetic approach. Subsequently the victim was convinced to take food or drink that contains sedatives. Then he turns to deep sleep.

In this study 31(31.63%) had accidental mode of poisoning that was precipitated by unmindful and hurried attitude. Almost similar result was observed in Mohammad Rafiqul Islam et al[12] in which accidental mode was 12.38%. But the study by SM Hossain et al[15] showed 0.05% and that is not consistent with our study. Accidental mode of poisoning was occurred by Savlon, Kerosene, Sedatives etc specially during heavy thirst, the victim started to drink with hurried approach and unmindfully. The study by Howlader MAR et al[13] described Savlon poisoning was in 5.55% case and G. K. Acherjya et al[16] showed Kerosene poisoning in 4.1% cases.

As recreational mode alcohol poisoning 7(7.14%) was observed among the male. Mohammad Rafiqul Islam et al[12], in their study Methanol poisoning was in 0.34% cases. So poisoning by alcohol was also significant in number. Most of this alcohol are made locally and unauthorized method in villages.

Familial disharmony/ domestic problems were the main 44(44.90%) precipitating factor of poisoning in our study. Those factors included quarrel, misunderstanding, lack of sacrificing tendency, adjustment and ego problem, lack of implementation of own decision etc that occurred with husband and others

members of the family. These findings were also observed in the study by G. K. Acherjya et al[16] (56.1%), Howlader MAR et al[13] (57%) and SM Hossain et al[15] (45%). Failure in love affairs 19(19.38%), Study and exam related causes 14(14.28%), sexual abuse 7(7.14%) , Job / business/ income dissatisfaction 5(5.10%) were other suspected causes. Love and affair related events included relation breakup, misunderstanding with partner as well as study and examination result described as poor class performance, failure or unsatisfactory result.This results are consistent with previous studies[27].

Conclusion

Trends have been changed in poisoning in our country. Transport related poisoning is an emerging social and public health emergency in Bangladesh. Almost all cases had precipitating factor that was related to psychological and behavioral conflict at the personal, family and social level. Improvement of, socioeconomic condition, law & order situation, level of education, removal of oppression, people's attitude and knowledge about poisoning are essential for reducing the incidence of poisoning.We need to plan a comprehensive strategy considering the factors related with poisoning events. That will help to prevent the events and its prognosis.

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Authors' Contributions :

Ahmad M, Habib AHMA conceived and designed the study, analyzed the data, interpreted the results, and wrote up the draft manuscript. Rahman FN, Sarkar MMH, Any OH, Munira FT and Chowdhury S were involved in the manuscript review and editing. All authors read and approved the final manuscript.

Data Availability :

Any inquiries regarding supporting data availability of this study should be directed to the corresponding author and are available from the corresponding author on reasonable request.

Ethics Approval and Consent to Participate

Ethical approval for the study was obtained from the Institutional Review Board. The written informed consent was obtained from all study participants. All methods were performed in accordance with the relevant guidelines and regulations.

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