

Pattern of surgical patients admitted into a unit of surgery department of Rangpur Medical College Hospital, Bangladesh

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ABSTRACT

Introduction: Although Bangladesh is included in the medium human development category, the people of densely populated Rangpur division are very poor due to unemployment of a large number landless farmers and labours. They are illiterate and of ill-health. **Aims and Objectives:** This study aimed to show the pattern of patients admitted in a surgery unit of Rangpur Medical College Hospital and to correlate surgical diseases to their age and sex. **Methods and materials:** This cross sectional study was done in a surgery unit of Rangpur Medical College Hospital. Total 450 admitted patients were randomly selected from the discharge book of unit during the period of June, 2019 to December, 2019. Patients with incomplete information were omitted. **Results:** Among the patients, 29 were male and 157 were female. Majority of them (27.5%) were of age group 25- 34 years followed by age group 35-44 (22.4%), 45- 54 (18.6%) and then others. Majority of patients with appendicitis and appnedicular lumps were in between 15 to 44 years. Females suffered more (69.2%) with biliary diseases than males (30.8%). Also, females suffered from cholelithiasis (56.4%) more than thrice the males (15.4%). **Conclusion:** Majority of patients were of cases of physical assaults followed by RTA, appendicitis and appendicular lump, biliary diseases, hernia & hydrocele and then others.

Key words: Monga, UTI, Cholelithiasis, Abscess, Hydrocele, Hernia.

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INTRODUCTION:

Bangladesh climbed up a spot to 135 among 189 countries in the 2019 Human Development Index, according to a report by the United Nations Development Programme (UNDP). The steady progress

was due to development, which had seen a reduction in poverty, along with gains in life expectancy, education and access to health care. Bangladesh's HDI value for 2018 is 0.614 – which put the country in the medium human development category.^{1,2}

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Rangpur is one of the 8 administrative divisions, situated in North-West zone of Bangladesh. It consists of eight districts and is a densely populated division of Bangladesh. Its population is about 17.6 million and density is more than 960/square km.^{3,4} The agriculture based rural economy, extreme poverty, high percentage of landless, lack of sufficient calorie intake, unemployment of vast agricultural labour force etc. are the root causes of vulnerability to Monga(a Bengali term referring to the yearly cyclical phenomenon of poverty and hunger in Bangladesh) in the northern regions, specifically few districts of greater Rangpur.⁵ Although Monga is overcome by the initiatives of government and Non-Govt. organizations, still majority of the rural people lives in poverty. They are illiterate and experience lack of proper health services.

In such socio-economic situation, Rangpur Medical College Hospital (RpMCH) is one of the two tertiary hospitals for the people to get majority of their medical services. Although the solvent people rust to the private clinics and nursing homes, majority have to attend the RpMCH. The capacity of RpMCH is only one thousand, where as the admitted patients into hospital account more than two thousand. It imparts both undergraduate as well as postgraduate teaching and training. Department of surgery comprises six general surgery units besides the specialties of orthopaedics, neurosurgery, paediatric surgery, urology and plastic surgery. Rangpur Medical College Hospital is in central position and has well access to the people of this division.

There are a few studies about the pattern of patients in a surgery ward of general hospitals. In a general hospital in Pakistan, the majority of patients had alimentary tract diseases 327 (29.1%), followed by urinary tract diseases 241 (21.4%), hernia 176 (15.6%), superficial lumps (12%), and hepato-biliary-pancreatic diseases (9.1%) and then others.⁶ A study in Kenya found the surgical patients distributed as follows: head injury (19%), chest injury (14%), acute abdomen (23%), long-bone fractures (25%) and burns (19%).⁷ Another study showed that among the death cases of a surgical ward of a general hospital in Nigeria, traumatic injuries were the most common clinical condition (31.8%) of the patients, which was followed by acute abdomen (24.5%), malignancy (18.5%) and then others.⁸

Our study aimed to show the pattern of patients admitted in a surgery unit of Rangpur Medical College Hospital and to correlate some surgical diseases to their age and sex.

METHODS AND MATERIALS:

This cross-sectional descriptive study was done in surgical unit V of Rangpur Medical College Hospital. Study period was between June, 2019 and December, 2019. A total 450 admitted patients were included. They were diagnosed, treated and discharged from the unit. Patients with incomplete information were omitted. Data were taken from discharge book of the unit with the permission of Professor of corresponding unit. Incomplete data were omitted. Data were analyzed manually.

RESULTS:

Among admitted patients, 293 were male and 157 were female. Majority of them (27.5%) were of age group 25- 44 years followed by age group 35-44 (22.4%), 45-54 (18.6%) and then others (Table I).

Table I. Distribution of patients by age group and sex

Age group	Male (%)	Female (%)	Total (%)
15-24	36 (8.1)	12 (2.7)	48 (10.8)
25-34	77 (17.1)	47 (10.4)	124 (27.5)
35-44	55 (12.2)	46 (10.2)	101 (22.4)
45-54	51 (11.3)	33 (7.3)	84 (18.6)
55-64	46 (10.2)	12 (2.7)	58 (12.9)
>65	28 (6.2)	7 (1.5)	35 (7.8)
Total	293 (65.1)	157 (34.9)	450 (100)

Majority of patients were diagnosed as the cases of physical assaults (15.5%) followed by road traffic accidents (13.5%), appendicitis and appendicular lump (9.8%), biliary diseases (8.7%), hernia & hydrocele (7.1%) and then others (Table II).

Table II. Distribution of patients according to diagnosis (n= 450)

Diagnosis	No. of patients	Percentage(%)
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Physical assault	70	15.5
RTA	61	13.5
Appendicitis and appnedicular lump	44	9.8
Cholecystitis & cholelithiasis & CBD stone	39	8.7
Hernia and Hydrocele	32	7.1
Intestinal Obstruction	27	6.0
Abcess	27	6.0
Carcinoma	19	4.2
Foot ulcer	19	4.2
Fistula in ano and anal fissure	15	3.3
Cellulitis	12	2.6
PUD	11	2.5
Hemorrhoid	11	2.5
Gangrene	11	2.5
Cyst	10	2.2
Lipoma	8	1.8
Varicose vein	5	1.1
Surgical Site infection	5	1.1
Hemothorax	2	0.5
Others	22	4.9
Total	450	100

Majority of patients with appendicitis and appnedicular lumps were in between 15 to 44 years. Majority belonged to the age groups of 15-24 years (31.8%) followed by

35-44 years (29.5%), then 25-34years (20.5%) and others. Females (52.3%) suffered slightly more than male (47.7%).

Table III- Diagnosed patients of appendicitis in relation to their age and sex (n= 44)

Age	Male	Female	Total (%)
15-24	7	7	14 (31.8)
25-34	3	6	9 (20.5)
35-44	6	7	13 (29.5)
45-54	3	1	4 (9.1)

55-64	1	2	3 (6.8)
>=65	1	0	1 (2.3)
total	21 (47.7)	23 (52.3)	44 (100)

Table IV describes that females suffered more (69.2%) with biliary diseases than males (30.8%). Females suffered from Cholelithiasis (56.4%) more than thrice the males (15.4%).

Table IV- Diagnosis of biliary diseases in relation to sex (n= 39).

Sex	Cholecystitis	Cholelithiasis	Choledocholithiasis	Total (%)
Male	4 (10.3)	6 (15.4)	2 (5.1)	12 (30.8)
Female	2 (5.1)	22 (56.4)	3 (7.7)	27 (69.2)
Total	6 (15.4)	28 (71.8)	5 (12.8)	39 (100)

DISCUSSIONS:

Majority of our patients were of age between 25 to 44 years (Table I) which was quite different from the survey done by Strang IW et al. in Glasgow. They found that over 40% of the patients in both surgical and orthopedic wards were over 65 years.⁹

Physical assault is not a disease and should not be treated in surgery ward. It should be treated in casualty ward. But the most prevalent cases (15.5%) were the physical assault in this study followed by RTA (13.5%), appendicitis and appendicular lump (9.8%), and then hernia (Table II), whereas in the study in Pakistan, the majority of patients had alimentary tract diseases (29.1%), followed by urinary tract diseases (21.4%) and then hernia (15.6%).⁶

Prevalence of physical assaults may be due to fact that in people here are frequently engaged with conflicts among themselves with their land boundaries. All these are the cause of agriculture based rural economy, extreme poverty and low literacy rate.

In our country, urinary tract diseases are not treated in surgery ward but in urology department. Thus long-bone fractures are treated in orthopedic ward and patients with burns are treated in burn unit department separately whereas they are treated in surgery department shown in a study in Kenya where head injury (19%) and chest injury (14%)⁷. If physical assault was omitted from our study, then RTA would be of highest prevalence. In our study, diagnosis of acute abdomen was absent, because these patients were distributed as

appendicitis or intestinal obstruction or of other causes in discharge book.

In this case, majority of patients with appendicitis and appendicular lumps belonged to the age groups of 15-24 years (31.8%) followed by 35-44 years (29.5%), then 25-34 years (20.5%) and others which is not similar to the study done by Oguntola AS et al.¹⁰ where the highest incidence in males and females occurred in the second and third decades, respectively although the incidence was marginally higher in males. On the contrary, in our study, females suffered slightly more than males (Table I).

Novacek G¹¹ describes that one of the most important risk factors is female gender. Rates of gallstones are two to three times higher among women than men which is concordance to our study. Our findings (Table IV) shows that females suffered from gallstones (56.4%) more than thrice the males (15.4%).

CONCLUSION:

Majority of patients were of cases of physical assaults followed by road traffic accidents, appendicitis and appendicular lump, biliary diseases, hernia & hydrocele and then others. Others include intestinal obstructions, abcess, carcinomas, foot ulcers, fistula in ano and anal fissure, cellulitis, PUD, hemorrhoid, gangrene, cysts and so on.

This study included a moderate number of patients due to short duration of time. A large scale study including all surgery units should be involved to conclude the pattern

of surgical patients admitted into Rangpur Medical College Hospital.

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