

## Analysis of clinical diagnosis of patient presenting to emergency of Patan Hospital

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### ABSTRACT

**Introduction:** Emergency department sees variety of patients with different acuity. We are conducting this study to analyze the clinical diagnosis of patient presenting to emergency department. This can help to plan protocols and prepare resources for the better management.

**Methods:** This is a cross sectional study that was carried out from June 2014 to May 2015. Age, sex, primary presenting complaint, secondary presenting complaint, primary and secondary discharge diagnosis was recorded. A register was maintained and data was entered upon discharge of patient and also during the rounds. Data was entered in google drive and verified every month. Proportion was used for analysis of data.

**Results:** Total data collected in emergency department was 3,815 which is 19.93% of total ER visits. Out of this, male were 1,996 (52.3%) and female were 1,809 (47.8%). On categorizing by age, neonates were 20 (0.5%), infants 73 (1.9%), under five year 295 (7.7%), pediatric – six years to fourteen years 265 (6.9%), adult- fifteen to sixty five years – 2,643 (69.3%) and geriatric- more than sixty five years 519 (13.6%). Among the top five presenting complains in ER, the most common presenting symptom was pain abdomen (21.86%) in which Gastritis (33.45%) was the commonest cause, followed by fever (15.54%) which was caused mostly due to Pneumonia (28.42%) then trauma (11.92%) which had soft tissue injury (32.31%) as its main cause followed by shortness of breath (9.1%) having COPD (52.44%) as its main cause and lastly, loose stool (5.69%) which had Acute gastroenteritis (11.98%) as its main cause.

**Conclusions:** Pain abdomen is the most common cause of patient presenting to emergency out of which gastritis is the most common.

**Keywords:** emergency, gastritis, pain abdomen

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**INTRODUCTION**

Emergency department sees varieties of patients with different acuity. Acquiring baseline data about the number of patient visiting hospital, their presentation and management is very important as it helps to prepare and plan protocols and resources. We are conducting this study to analyze the clinical diagnosis of patient presenting to emergency department.

**METHODS**

This is a cross sectional study that was carried out from June 2014 to May 2015. Age, sex, primary presenting complaint, secondary presenting complaint, primary and secondary discharge diagnosis was recorded. In a year 30,000 patient visits emergency department. Out of which 70% (21,000) visits are during day time and 30% (9,000) visits are during night. We had tried to collect all the patients from the emergency department. A register was maintained and data was entered upon discharge of patient and also during the rounds . Data was entered in google drive and verified every month. Proportion was used for analysis of data.

**RESULTS**

Total data collected in ER was 3815. i.e 19.93% of total ER visit, out of which male were 1,996 (52.3%) and female were 1,809 (47.8%). Category by age is as follows. Neonates were 20 (0.5%), infants 73 (1.9%), under five year 295 (7.7%), pediatric – six years to fourteen years 265 (6.9%), adult- fifteen to sixty five years – 2,643 (69.3%) and geriatric- more than sixty five years 519 (13.6%). Data collected from June to November 2016 are as follows

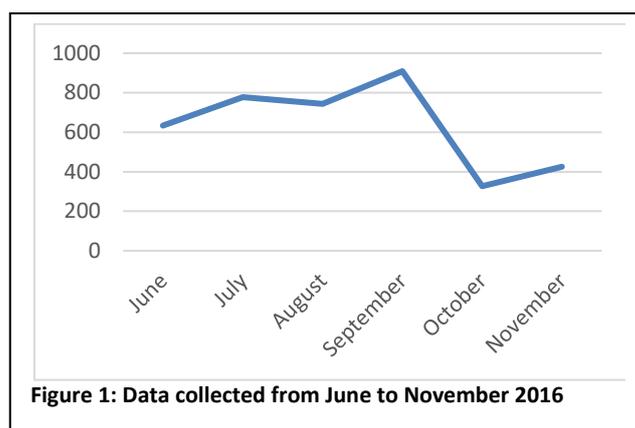


Figure 1: Data collected from June to November 2016

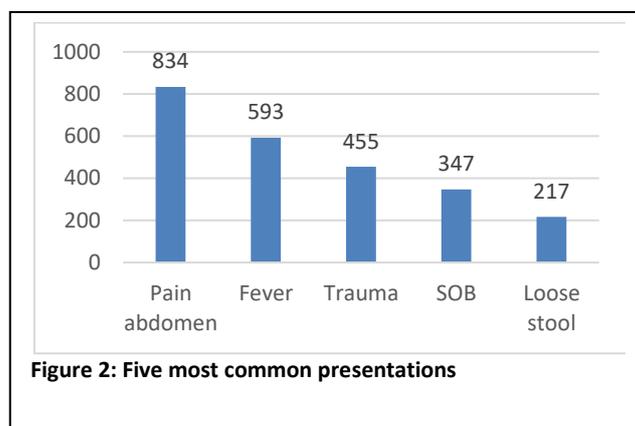


Figure 2: Five most common presentations

Presentation	ED Diagnosis	June	July	August	September	October	November	Total
Pain abdomen	Gastritis	75	53	45	56	20	30	279
	Appendicitis	11	29	25	35	13	16	129
	Ureteric colic	19	25	23	30	5	11	113
	Urinary tract infection	24	19	17	15	7	6	88
	Cholelithiasis	2	3	2	6	3	1	17
Fever	Pneumonia	6	15	26	53	5	7	112
	Typhoid	8	13	18	43	10	10	102
	Viral fever	19	10	22	21	6	5	83
	Urinary tract infection	6	7	16	12	3	7	51
	Tonsillitis	7	9	13	14	3	0	46
Trauma	Soft tissue injury	38	31	24	36	6	12	147
	Cut injury	20	30	16	29	13	11	119
	Fracture	22	30	15	24	5	9	105
	Dislocation	5	3	1	3	0	1	13
	Head injury	0	5	2	1	1	0	9
Shortness of breath	COPD	17	26	26	61	17	35	182
	Pneumonia	1	5	5	15	5	7	38
	Bronchial Asthma	0	2	5	8	3	4	22
	Heart failure	3	4	5	4	2	4	22
	Pleural effusion	0	3	0	3	0	2	8
Diarrhoea	Acute gastroenteritis	0	0	24	2	0	0	26

Table 1: Five common emergency diagnosis of common presentation according to months. P = 0.0

Bandana Pandey 3.41% of total cases were found to have appendicitis which is a similar finding as the diagnosis

Common presentation	Emergency Diagnosis	Age (Years)						Gender	
		Neonate	Infant	1 to 5	6 to 14	15 to 65	> 65	Female	Male
Pain abdomen	Gastritis	0	0	1	9	248	21	162	117
	Appendicitis	0	0	2	21	100	6	68	61
	Ureteric colic	0	0	0	3	108	2	42	71
	Urinary tract infection	0	0	2	9	72	5	74	14
	Cholelithiasis	0	0	0	0	16	1	13	4
Fever	Enteric fever	0	1	4	84	12	1	51	61
	Pneumonia	0	9	29	46	10	18	59	43
	Tonsillitis	0	0	16	22	8	0	38	45
	Urinary tract infection	0	0	4	37	6	4	36	15
	Viral Fever	1	12	42	19	8	1	19	27
Trauma	Soft tissue injury	0	1	10	12	119	5	58	89
	Cut injury	0	0	7	14	94	4	29	90
	Fracture	0	0	8	17	66	14	30	75
	Dislocation	0	0	0	1	11	1	3	10
	Head injury	0	0	0	0	8	1	5	4
Shortness of breath	Chronic obstructive pulmonary disease	0	0	0	0	73	109	123	59
	Pneumonia	0	2	2	0	16	18	23	15
	Bronchial Asthma	0	0	2	3	17	0	14	8
	Pleural effusion	0	0	0	1	6	1	5	3
	Heart failure	0	0	0	0	1	4	5	0
Diarrhea	Acute gastroenteritis	0	0	0	3	19	1	15	11
Chi Square test (p value)		0						0	

**Table 2: Five common emergency diagnosis of common presentation according to age and gender**

## DISCUSSION

The most common presenting symptom was pain abdomen (21.86%) in which Gastritis (7.31% of total) was common in all months while appendicitis (3.38%), ureteric colic (2.96%) and urinary tract infection (2.31%) varied as second most common cause. In an emergency department audit done by Dr. Bandana Pandey at KMC, gastritis was the third most common cause of emergency visit but in our finding it is in the top as differentiation of pain abdomen for causes other than gastritis is made after of other possible diagnoses. Fever (15.54%) was second most common while in June viral fever and in November Typhoid fever was observed to be highest amongst cause of fever. In an epidemiological study done by S Malla and P Kansakar the peak of enteric fever was found in month of May to July in difference to our data collection may be because highest number of data was collected in the month of September. Soft tissue injury (3.85%) was most common cause of trauma (11.92%) and COPD (4.77%) was the common cause of shortness of breath (9.1%) in all months. Fifth common presentation found was diarrhea (5.69%) which occurred in August this could be because of rainy season.

Further analysis with different age group showed that gastritis was still commonest cause of pain abdomen, appendicitis 3.38% was second most common, In study done by Dr.

was made after investigation along with radiological findings, except in the age group 15 to 65 years in which ureteric colic was common, Ureteric colic i.e. 3% was third common in all age, this finding also corresponds to the finding with Dr. Bandana i.e. 3.5% as the diagnosis is solely clinical except in six to 14 years and more than 65 years in whom UTI i.e. 3.5% was common. *Most common cause of fever in all age group was Pneumonia except in infant and children of 1 to 5 years in which viral fever was common and in the group five to 65 years enteric fever was common.* Soft tissue injury i.e. 3.85% was the most common cause of trauma, in similar study done by Dr. Bandana Pandey soft tissue injury (sprain) was 19.8% the second common in orthopedic cases, the finding is different from our finding because the total trauma cases collected in our data is more than that of Dr. Bandana's and also diagnosis is made after radiological exclusion, except in age group six to fourteen years and more than sixty five years in which fracture was most common. Common cause of shortness of breath was COPD in age group more than fifteen years and pneumonia in infant and one to five year children and bronchial asthma in five to fourteen year child.

Evaluation of gender showed that all causes of pain abdomen was more in male however ureteric colic was observed more

in female. Pneumonia and Urinary tract infection was common in female, In study done by C.Jokinen, pneumonia was more common in males than females which is different from our finding as because the diagnosis was made after radiological and autopsy finding, In study done by Sharma A, Shrestha S, UTI in children was more common in females i.e. 65% and fever was their presentation i.e. similar to our finding. All other causes of fever were more common in male. Overall trauma was more common in male and similar finding was noted in study done by S.R Shrestha according to which males were more vulnerable in RTA while all cause of shortness of breath was more in female.

In our study number of pediatric patient representation was low, data collection was not symmetric however, and large number of data was obtained. The number of data collected per month decreased during the last months of study due to compromise in the resource, however this data will give an idea about the base line values for future studies.

### CONCLUSION

Pain abdomen is the most common cause of patient presenting to emergency out of which gastritis is the most common. Further study in this matter could provide better understanding of the cause.

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