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ORIGINAL ARTICLE

The Causes of Visits of Non-Urgent patients to Emergency Department in King Fahad Hospital-Albaha, Saudi Arabia

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ABSTRACT

OBJECTIVE

The use of the emergency department by patients presenting with non-urgent conditions has become an important problem that is faced by all local and global health systems. The main objective of this article is to determine the causes of non-urgent emergency department visits by patients.

METHOD

This is a retrospective, descriptive study, conducted in the emergency department from January to April 2020. All patients triaged according to the Canadian Triage and Acuity Scale (CTAS) as CTAS -5 (non-urgent conditions) were included during the study period and their data such as demographics and presenting complaints were extracted from the hospital electronic files. Ethical approval was taken from the hospital ethical review board.

RESULTS

Out of 1308 patients that visited the emergency department (ED), 327 (25%) patients were categorized as non urgent visits (CTAS-5) according to the triage system. There was a slight female predominance of 165(50.5%) as compared to males 162(49.5%). 71% of patients were between 20-40 years of age. It was identified that 92% of the selected patients had non-urgent conditions, did not need any treatment in ED and could be treated and followed up in primary health clinics or hospital polyclinics. 32.7% of patients had no chronic illness and 32.1 % of the patients had visited the ED before at least one time for the same complaint. The most common complaints at presentation for non-urgent visits were musculoskeletal system pain (30.5%), mild non-surgical abdominal pain (17.7%), Upper respiratory tract infection (9.5%) and fever (3.7%). It was found that 5.8% needs to be upgraded to CTAS 3-4 zone for further assessment and management.

CONCLUSIONS

The majority of non-urgent visits at the emergency department could be treated in other facilities like primary health care and hospital polyclinics. Proper, safe application of triage system and necessary education to the patients can reduce the emergency department overcrowdedness which will ensure patients safety and improve patients' clinical outcome.

KEYWORDS

Non-urgent visits, Triage system, overcrowdedness, Canadian Triage and Acuity Scale, Emergency Department throughput

BACKGROUND

The use of emergency departments (EDs) for non-urgent visits by patients has become an important health system problem locally and globally, especially after the development of the specialty of emergency medicine and triage system in the world.[1, 2] When non-urgent patients are seen in the ED, especially in busy EDs, it leads to significant effects on the quality of service being provided for critical patients, adverse clinical outcomes and can also result in exhaustion of the ED resources and staff as well. [2, 3]

Most of the advanced EDs are using triage systems which are prioritizing the patients according to their severity.[4, 5] The emergency department in King Fahad Hospital-Albaha is using the Canadian Triage and Acuity Scale (CTAS).[6] The triaged patients in the category of CTAS 5 are classified as non-urgent patients and are directed to fast-track section within ED. In this section, Emergency Physicians (EPs) work as if they were in the public health clinics and provide consul-

tion for minor ailments.[7] The fast track section further helps in triaging the patients and to detect if any urgent or emergent conditions was missed during the initial triage which are very few in an effiicient triage system. Robust triage systems can effectively identify life-threatening conditions from non urgent cases,[8] but due to the fast track clinics, some patients are upgraded to higher prioirty (CTAS 4 or 3) if they need further investigations or diagnosis. Unless the patient develops an emergency condition, while he is waiting to be seen in the fast-track clinics, those patients can be seen in the public healthcare clinics outside the ED by GPs or family medicine physicians.[9]

Nonurgent visits contribute to the overcrowding of the emergency department[10, 11] which might be reduced with a proper triage system accompanied by effective working of all components of health care systems in the region such as public health clinics (PHCs) and family health systems.[12] It has seen that almost all the triage system instruments can detect emergency or life-threatening condition.[13] It is imperative to implement triage systems effectively to recognize such patients and ensure patients safety by proper assessment, rather than to make an additional barrier for them to access emergency care by diverting limited resources and health care professionals to non urgent care.

MATERIALS AND METHODS

This is a retrospective, descriptive study conducted at King Fahad Hospital-Albaha in the Kingdom of Saudi Arabia during January to April 2020. King Fahad Hospital- Albaha is located at the center of the region with another 9 small community hospitals and is classified as a tertiary care hospital with many specialized centers. Annual ED visits are around 90,000 to 100,000 patients. The study was conducted after the appropriate ethical approval from the hospital research committee and permission from medical administration.

Data was collected from the hospital triage system from the group of patients that categorized as non-urgent patients (CTAS-5) above 14 years, which is the definition of adult age in Saudi Arabia ministry of health. Data was collected during the ED visits in the regular morning ED duties from Sunday to Thursday when other options of accessing medical care are available such as PHCs and hospital polyclinics etc.

Information of the patient taken from the electronic system and triage nursing notes showing the reason for visiting the ED.

Data was collected on designated performa. All those patients who were visiting ED through the reception and triage area and their category awas non-urgent patients (CTAS 5) were inlcuded in the study. Paediatric group of age less than 14 years old and patients who didn't register in the triage area were excluded. The SPSS 27.0 (IBM Inc., Chicago, Illinois, USA) software was used to analyze the data.

Years	Frequency	Percentage	Cumulative Percentage
14 -20	70	21.4	21.4
21 - 40	167	51.1	72.5
41 - 60	68	20.8	93.3
> 60	22	6.7	100%
Total	327	100%	

(Table 1) The range of the age of the sample

RESULTS

A total number of 327 (25%) ED visitors were included in the CTAS-5 category from a total of 1308 patients during the study duration. These patients were categorized as non-urgent visitors after proper triage done by experienced and trained emergency resident and triage nurse.

It was seen that 162 (49.5%) were male and 165 (50.5%) female. 71% (P value 0.001) of ED visitors age was between 20-40 years. It was identified that 92% of the selected patients had non-urgent conditions with no chronic illness, whereas 32.1% of the patients had visited ED before for the same complaint.

The most common complaints at presentation to emergency department triage were musculoskeletal system pain (30.5%), mild non-surgical abdominal pain (17.7%), common cold (9.5%), fever (3.7%), dizziness (3.05%), and non-urgent gynecological conditions (3.05%) as shown in Figure 1. It was found that 5.8% of patients needed to be upgraded from CTAS 5 to 4 for further evaluation and investigations.

We found that 32.7% (P : 0.059) of the patients who

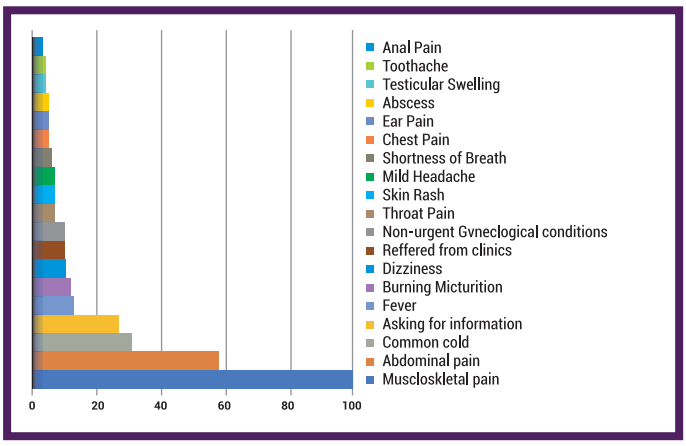

Figure 1: Cafuses of visits of non-urgent patients to the emergency department

visited ED has a chronic illness and had their clinics' follow-up and 32.1 % (P: 0.001) had at least one visit to ED with the same complaint.

DISCUSSION

One of the major causes of emergency department crowdedness is non-urgent cases. In this study we have tried to identify what are the common presentations for non-urgent visits. A lot of studies have been done to find out why EDs are preferred for seeking medical advice and the causes of visiting EDs vary from one area to another, from one health system to another health systems and from region to region.[14, 15]

The non-urgent patients categorized as CTAS 5 in the Canadian Triage and Acuity Scale, are the lowest triage grade in ED and most likely these patients are very stable and do not need any further intervention or investigations.

In this study, we found that 92% of the non-urgent selected patients could be treated in PHCs duringworking hours with or without previous appointments. A considerable amount of non-urgent patients visited ED because of musculoskeletal pain(30.5%), ranging from muscle pain to joints pain. Although patients having acute severe musculoskeletal pain are encouraged to seek immediate medical care in emergency departments, but the patients in our study had mild pain and only needed simple analgesia after proper assessment from triage officers, similar to other studies.[16]

The second cause for visiting ED for non-urgent visits was seen to be non-specific mild abdominal pain(17.7%) while the third most common cause was common c o l d symptoms(9.5%). Such patients with minor ailments can cause overcrowding of the emergency department beside the critical and emergency cases which can affect patients safety and outcome, and it is considered a major concern for all emergency departments[17]

In this study we found that a large number of patients had visited ED at least one time before, for the same complaints, which suggests the need for the continuation of follow-up of their chronic conditions through PHCs or hospital polyclinics. This might also suggest that this group of patients might not be satisfied with their diagnosis or medications or they are not in regular followup in their clinics. Few patients (5.8%) needed further investigations and were upgraded to the category of less urgent patients (CTAS 4). It is imporrtant to recognize this subgroup of patients as it might be unsafe to divert them to other facilities like PHCs. At the same time this group of patients could be seen and triaged in PHCs and have a proper referral with full clinical information to the tertiary hospital. Further studies may be required to determine the efficiency of the triage system used in the hospital and PHCs as well.[13]

CONCLUSION

The majority of non-urgent visits to the emergency department could be treated in other facilities like primary health care and hospital polyclinics. Proper and safe application of triage system and necessary education to the patients will reduce the emergency department overcrowdedness which will ensure patients safety and improves patient's clinical outcomes.

LIMITATIONS

The main limitation of this study is that it was conducted in single emergency medicine and trauma center in the region, the study was done during working hours and on weekdays.

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