Evaluation of Diagnostic Accuracy in Emergency Department and role of clinical, point of care testing and imaging in it in a tertiary care teaching hospital in northeast India.

Introduction:

Emergency department involves challenging care for undifferentiated and unexpected patients with critical illnesses or injuries requiring immediate medical attention. It has a vital role in triaging the patients and making the proper diagnosis for their better management.

Aim and objectives:

The aim of this study is to evaluate diagnostic accuracy in the Emergency Department and the role of clinical diagnosis and impact of addition of point of care testing and imaging in the process of making a diagnosis in a tertiary care teaching hospital in northeast India.

Materials and methods:

Retrospective cohort study in a single tertiary level teaching Superspeciality hospital in Northeast India where approximately 600 patients gets admitted through ED every month. It is purely an observational study and no intervention was done.

Inclusion Criteria	Exclusion Criteria
All patients visiting to ED and subsequently getting admitted	Cases that are discharged/ DAMAObstetrics and Gynecology, Burns, Psychiatric illness

The provisional diagnosis at the time of presenting to ED andthe final diagnosison discharge were compared and were analyzed statistically. Diagnosis are made based on presenting complaints, past medical/surgical history, physical examination, point of care tests and radiological imaging. The patient were categorized into three groups/catagories:

Category A: History +Physical examination alone.

Category B: Cat A + Point of care Tests

Category C: Cat B + Radiological imaging

Results:

A total of 200 patients were there in the sample size.

Downloaded from ccemjournal.com

Category	Correct diagnosis	Incorrectdiagnosis	Total
Cat A	27(62.79%)	16(37.2%)	43
Cat B	67(80.72%)	16(19.27%)	83
Cat C	63(85.13%)	11(14.86%)	74
Total	157(78.5%)	43(21.5%)	200

Discussion:

There are very few studies on correlation between emergency department diagnosis and final diagnosis till today. Thus, the present study may be used as a baseline for future study, clinical audit or other quality assurance in the field of diagnostic accuracy in emergency department.

The duration of this study is period of one month among 200 admitted patients from ED. A total of 157 patients (78.5%)were diagnosed accuratelywhilein 43 patients (21.5%) the diagnosis wasincorrect.The maximum correct diagnosiswere seen in Cat C group (85.13%) and maximum incorrect diagnosis were seen in Cat A group. And from the calculation it was clear that with the use of point of care testing the diagnostic accuracy is increasing which was further increased by the use of imaging. And in incorrect group the diagnostic inaccuracy was decreased by use of point of care testing which was further decreased by using imaging.

Conclusion:

ED is a dynamic environment where patients land up with various presenting complaints. At times it becomes difficult for ER physicians to evaluate a patient correctly due to time constraints. The ER physicians should take a brief concised and focused history with examination following to the pertaining ailment. Many newer POCTs (Point of Care Tests) have come in the recent time which helps to consolidate the admitting diagnosis with evidence. Of course working in ED one has to master the skill and art in performing history taking and physical examination in an efficient manner, which is the most important and rewarding diagnostic tools in ED which will help to achieve the higher accuracy rate.

- No conflict of interest is there by anyone in this study.
- No financial help taken from anyone.
- Ethical clearance was done.

Downloaded from ccemjournal.com

Reference:

1. 2013 by the Society for Academic Emergency Medicine. US
2. 2016 by the Society for Academic Emergency Medicine.
3. Hongkong journal of emergency medicine a comparison of emergency department admission diagnosis and discharge diagnosis: retrospective study,2003.

Author:

1. Dr. Yaseng Pegu, Fellow, Emergency Medicine (Narayana Superspeciality Hospital, Guwahati)
2. Dr. Apurba Kumar Borah, HOD, Critical Care and Emergency Medicine (Narayana Superspeciality Hospital, Guwahati)
3. Dr. Soumar Dutta, Consultant and Coordinator, Emergency Medicine (Narayana Superspeciality Hospital, Guwahati)

Author

- 
  CCEM Journal
  View all posts

Downloaded from ccemjournal.com