

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

All patients visiting to ED and subsequently getting admitted

Exclusion Criteria

Cases that are discharged/ DAMA Obstetrics and Gynecology, Burns, Psychiatric illness

The provisional diagnosis at the time of presenting to ED and the final diagnosis on 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/categories:

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.

Category	Correct diagnosis	Incorrect diagnosis	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 accurately while in 43 patients (21.5%) the diagnosis was incorrect. The maximum correct diagnosis were 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.

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.

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