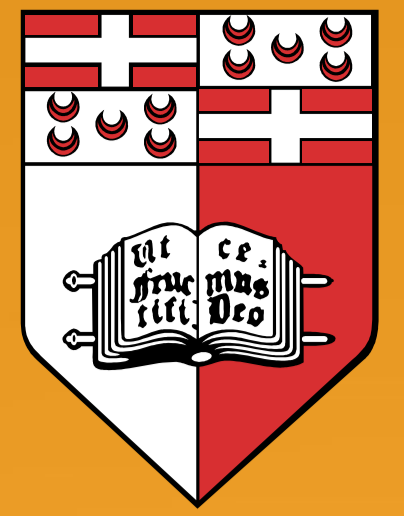


Risks of Drug Induced Effects and Hospital Admissions

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INTRODUCTION

- Drug induced effects may be due to adverse drug events, drug therapy failures and medication errors, which if prevented would improve the clinical outcome of the patients.¹
- The occurrence of drug induced effects results in increased hospital admissions and a prolonged hospital stay as well as an increase in costs.¹
- The occurrence of drug induced effects has a negative impact on patient safety since they may result in patient morbidity and mortality.²

AIMS

- To investigate the occurrences of drug induced effects related to hospital admissions.
- To identify drug related hospital admissions and classify them into different categories depending on the effect that occurred.
- To evaluate the risk associated with these drug induced effects.
- To propose methods to decrease the incidence of patients being admitted due to drug induced effects

METHOD

Obtaining consent from 5 selected consultants for the purposes of the research, Data Protection Officer, Mater Dei Hospital (MDH) Chief Executive Officer, Director of Human Resources and the Medical Administrator of MDH. Submission for approval of research by ethics committee.

A Data Collection Form was used to document important notes from the patients' files on the post admitting days of the selected consultants. If the cause of admission was due to a drug induced effect, the patient was interviewed.

Hospital admissions due to drug induced effects were classified as follows: Overdose Toxicity and Side Effects, Accidental and Suicidal Ingestion, Superinfection, Noncompliance, Drug Abuse, and Drug Allergy. Statistical analysis was carried out using SPSS Version 20.

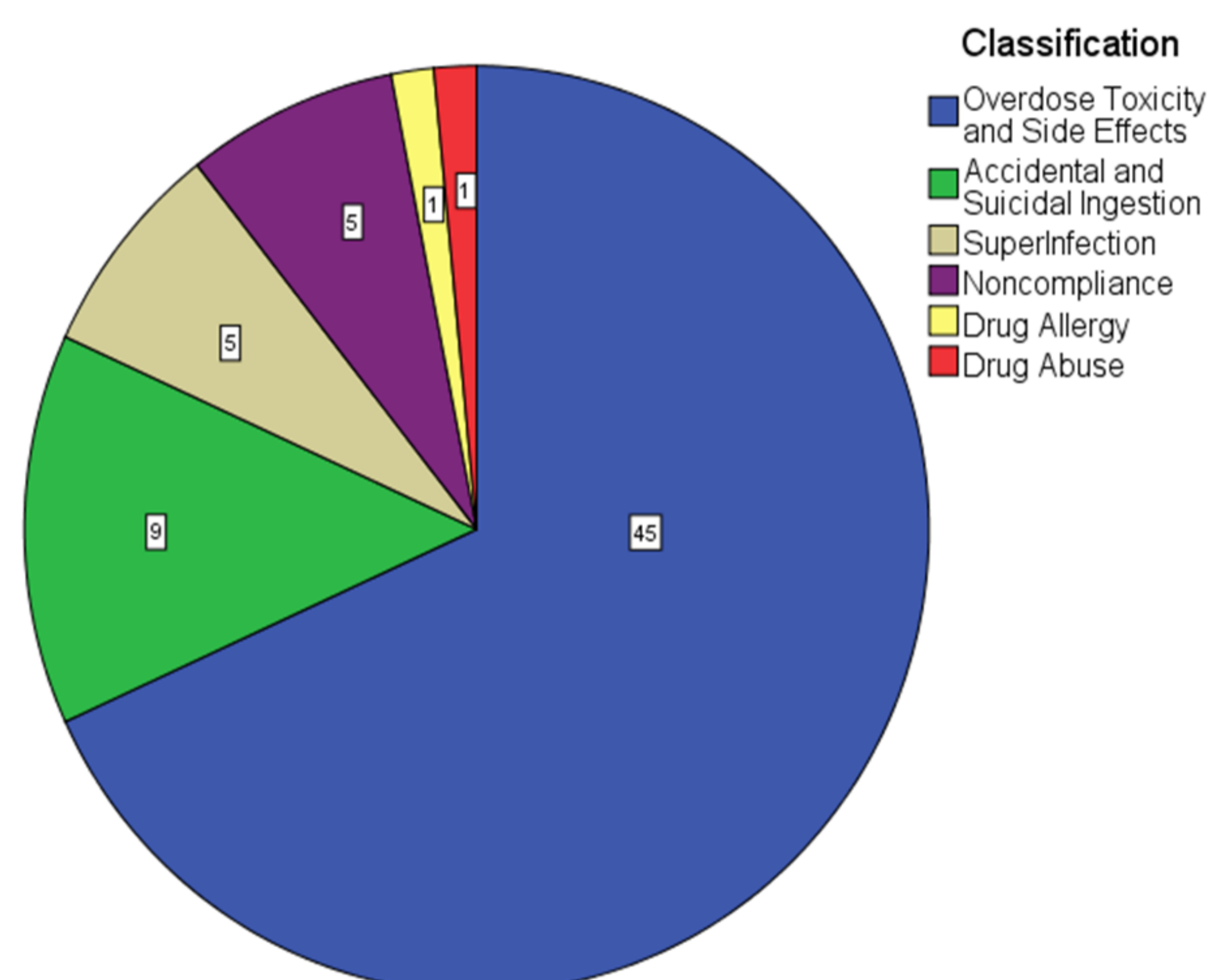
Compilation and distribution of a Risk Matrix to four physicians and four pharmacists to assess the risk associated with the drug induced effects of ten selected cases.

Investigate how to reduce hospital admissions due to drug effects and propose methods to help reduce such admissions.

RESULTS

- Out of 538 cases reviewed, 12.3% of hospital admissions were identified to be due to drug induced effects (n=66).
- 21 cases of drug induced effect admissions were due to antihypertensive medications, 15 cases were due to psychiatric drugs and 9 cases were due to diabetic drugs.
- The 70-89 year group was the most common age group presenting drug induced effects.
- 45 cases were classified as being due to overdose toxicity and side effects. This classification showed prominence in all age groups except in the 'less than 49 age group' where accidental and suicidal ingestion was the main classification.
- All pharmacists (n=4) and two of the physicians marked at least one case in the risk assessment exercise with a score of 15 or more indicating the need for immediate action.
- Paired sample t-test showed that there was no statistical significance between the evaluations of the physicians and pharmacists.

Figure 1: Classification of Drug Induced Effects (N=66)



CONCLUSION

It was found that three quarters of hospital admissions, resulting from drug induced effects, were preventable. The measures that were identified by the study to help reduce drug induced effect hospital admissions were a centralised computer system, health smart card, education and regular follow ups. Since the paired sample t-test showed compliance between the physicians' and pharmacists' evaluations, interdisciplinary collaboration could further contribute towards mitigating risks, thereby improving patient safety.

References

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²Paul TR, Rahman A, Biswas M, Rashid M, Ul-Islama A. Medication Error in a Private Hospital of Bangladesh. *Bangladesh Pharmaceutical Journal*. 2014; 17: 32-37.