The Incidence of Drug Hypersensitivity and Idiosyncrasy as a Presenting Problem to an Emergency Department

Anne K. Ellis, MD FRCPC, Queen’s University, Kingston, ON

ABSTRACT

Background: The community incidence of allergic reactivity to medications is poorly documented, but thought to be less than that observed in inpatient populations.

Objective: To describe the outpatient epidemiology of drug hypersensitivity occurring in a tertiary care center in Canada.

Methods: Three years of emergency department (ED) charts were reviewed. All ED visits given a discharge diagnosis of “allergic reaction” or “anaphylaxis” were pulled and directed to the investigator. Chart review and direct patient contact determined if criteria for these diagnoses were properly met.

Results: Over the 3-year time period, 153,990 patients were assessed in the Emergency Department at KH4. A total of 554 cases of “allergic reactions” (including anaphylaxis) were identified (0.36% of visits).

Objective

- Aim of the current study was to describe community incidence of drug hypersensitivity in a tertiary care center in Canada

INTRODUCTION

- Drug hypersensitivities and pseudo-allergic reactions represent an important aspect of iatrogenic pathology
- Exact incidence of allergic reactivity to medications is in the community is unknown
- Rates among inpatient populations range from 0.6% to 2.7%
- Currently no community/outpatient epidemiologic data from Canada has been reported

RESULTS

- Over the 3-year time period, 153,990 patients were assessed in the Emergency Department at KH4.
- A total of 554 cases of “allergic reactions” (including anaphylaxis) were identified (0.36% of visits).
- Of these, 111 were labeled secondary to medications.
- Further chart review reduced this number to 102 reactions that could be classified as either allergic or idiopathic (pseudo-allergy).
- Thus the incidence of drug hypersensitivity/idiopathic as a presenting problem was 0.07%.
- Only 22 of the patients were male (21.5%).
- Average age of patients was 39 (range 11 months to 93 years).

METHODS

- Retrospective chart review of emergency department visits from Kingston General Hospital (KH4) over a 3 year period from September 1999 to November 2002.
- All Emergency visits given a discharge diagnosis of “allergic reaction” or “anaphylaxis” were pulled and directed to the investigator.
- Chart review and direct patient contact determined if criteria for hypersensitivity reaction and/or idiopathic reaction (pseudo-allergy) were met.
- Reactions had to include symptoms consistent with histamine release (e.g. pruritus, urticaria, angioedema, wheezing, etc.) and could not be better explained by an alternative diagnosis (e.g. side effect of medication, intercurrent illness).
- Reactions to NSAIDs, and opiates were classified as idiopathic (pseudo-allergy) as they are mediated through non-IgE mechanisms, all others were considered an allergic reaction.
- Anaphylaxis was defined as per the Canadian Pediatric Surveillance Program:
  - a severe allergic reaction to any stimulus, having sudden onset, involving at least two body systems, with multiple symptoms

REFERENCES & ACKNOWLEDGEMENTS:


This study was internally funded. The author would like to acknowledge Dr. James Day for his editorial review of the abstract.