

The Prevalence of Drug Induced Gastritis among Patients with ADR

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ABSTRACT

Background: Gastritis is the inflammation or swelling in the stomach lining which cause severe and nagging pain. In USA DIG is the utmost diagnosed disease due to ADR, and this can be fatal as well. Over a 35 million people consumes drug daily and about 25% of which may develop gastritis. NSAIDS are among those medicines that can cause gastric mucosal damage that results NSAID induced gastritis. The objective of the study was to determine the prevalence of DIG among patients with ADR.

Methods: This was a retrospective study where the 100 patients record was retrieved for two years. The exclusion criteria includes all patients with non compliance, over dosage, medication error, poisoning, natural product or homeopathic products whereas all the patients with drug induced diseases reported in hospital out patient department (OPD) regardless of duration, severity and type was included in the study

Results: This study contains a total of 100 patients. The mean age of patient was 31.2 + 8.4. In the study we observed 34% of the patients with ADR due to the drug induced diseases, and the out of which was Gastritis (9%), diarrhea (6%), anemia (5%), hypotension (3%), hepatic dysfunction (3%) where as 74% were other disease.

Conclusions: The prevalence of DIG is high in local population and it is due to the anticoagulant treatment like NSIAD and acetylsalicylic acid.

Key words: Adverse drug reaction (ADR), drug induced disease (DID), gastritis, hepatic dysfunction, hypotension.

INTRODUCTION

Worldwide considerably leading cause of morbidity and mortality is adverse drug reactions ADR. To the published studies the prevalence of ADR reported to be in range of 0.16 to 16%. [1] A large number of patients hospitalized due to the ADR morbidity and is more common hospital registry/admission. [2] Among populations with certain ages like elder age and conditions i.e. multiple comorbidities; the hospitalization due to ADR is much high and these morbidities may prevail for longer/life time but sometime only extent to ICU. [4-5] Between ADRs due to the drug-induced diseases [DID], the most common is drug-induced gastritis [DIG]. Gastritis is the inflammation or swelling in the stomach lining which cause severe and nagging pain. In USA DIG is the utmost diagnosed disease due to ADR, and this can be fatal as well. Over a 35 million people consumes drug daily and about 25% of which may develop gastritis. Non-steroidal anti-inflammatory Drugs (NSAIDS) are among those medicines that can cause gastric mucosal damage that results NSAID induced gastritis.[6-9] The main objective of this study was to determine the prevalence of DIG in patients with ADR in the local population.

MATERIAL AND METHODS

This was a descriptive retrospective observational study where a total of 100 drug induced diseased patients were retrieved from the hospital records. The venue of the study was Medical Department of Services Hospital, Lahore. The study duration was of six months and we had retrieved the patient's records from January 2017 to June 2017. The exclusion criteria includes all patients with non compliance, over dosage, medication error, poisoning, natural product or homeopathic products whereas all the patients with drug

induced diseases reported in hospital out patient department (OPD) regardless of duration, severity and type was included in the study. The retrieved information includes, demographics and medical history of patients specifically date of DID, suspected medication, name of drug, dose taken, reason of using the suspected drug, pre existing medical history i.e. allergy and pregnancy etc. All the adverse drug reactions were categorized as Type A, Type B, Type C and Type D where as the Type A is Augmented, B is Bizarre, C as continuous and D as delayed reactions. An ethical approval was taken from hospital ethical committee.

Statistical analysis: All the collected data was stored electronically & analyzed later by using SPSS version 20. Descriptive statistics were applied to calculate mean and standard deviations. Frequency distribution and percentages were calculated for qualitative variables like ADR Type, gender. Over all a P values less than 0.05 was considered statistically significant.

RESULTS

This study contains a total of 100 patients. The mean age of patient was 31.2+8.4. 4 (44%) of the patients were aged 18-25 whereas 3 (33%) patients were belonging to age 26-35 years and 23(23%) were of age above 35. The demographics of the participants were given in table 1. The gender distribution of all the patients can be seen in figure 1.

In the study we observed 34% of the patients with ADR due to the drug induced diseases, and the out of which was Gastritis (9%), diarrhoea (6%), anemia (5%), hypotension (3%), hepatic dysfunction (3%) where as 74% were other disease. The detailed summary is given in table 2.

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Table 1: Demographic summary of patients

| Demograph | n |
|-----------------------------|------------|
| Age | |
| Mean age | 31.2 + 8.4 |
| 18-25 | 44 (44%) |
| 26-35 | 33 (33%) |
| Above 35 | 23(23%) |
| Educational status | |
| Below Primary | 21 (21%) |
| Primary to matriculation | 40 (40%) |
| Above Matric | 19 (19%) |
| Socioeconomic status | |
| Low | 60 (60%) |
| Middle | 30 (30%) |
| High | 10 (10%) |
| Smoking | |
| Yes | 54 (54%) |
| No | 46 (46%) |

Figure 1: Gender of the patients

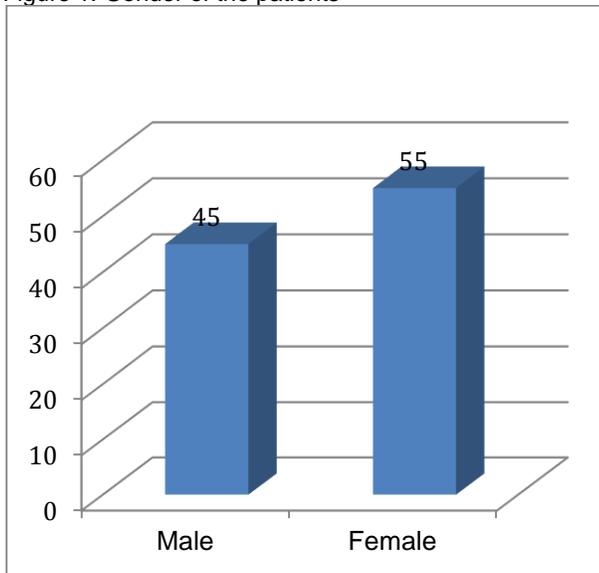


Table 2: Detailed summary of drug induced diseases

| Drug induced disease | n(%) | Suspected drug |
|-----------------------|-------|---|
| Gastritis | 9(9%) | Acetylsalicylic acid, NSID & Others |
| Diarrhea | 6(6%) | Azithromycine, aceclofenac+chlorzoxazone+acetamenophin, amoxiciline and other |
| Upper GI bleeding | 1(1%) | Ibuprofin, Diclofenac & others |
| Hypotension | 3(3%) | furosemide inj. Amlodopine, ceftriaxone inj. & others |
| hypatic disfunction | 3(3%) | ART, ATT and others |
| Anxiety | 2(2%) | Thyroid hormone, FDC and others |
| Acne | 1(1%) | Steroids |
| Periphral nephropathy | 1(1%) | ATT, ART |
| Self harm behavior | 2(2%) | peragablin |

DISCUSSION

This study was conducted to determine the prevalence of DIG among patients with ADR in Chakwal, District; this was also the first study of its kind to estimate the number of cases with DIG diagnosis with ADR through retrospective hospital records. Our study reported the overall prevalence of DIG in ADR patients as 9%, which was quite high as compared to other studies [10-11] but similar to the study results of Permpongkosol et al¹². The finding of our study shows that the more common DID is DIG and it is commonest among elder ages, the probable reason may be the presence of other multiple chronic diseases, variety of hospitalization, various physicians along with difference surgical or medical procedures. Our study reports more female cases with DIG than males which is similar to the findings of Zopf et al¹³. The findings of our study shows that the DIG is more common in patients with low socioeconomic status, and people with less education and belong to the rural areas. The reason may be the unawareness of the drug usage or may be the lack of practices for medical or surgical procedures. Another factor for high DIG is the drug type and its mode of action, as of many available medicines is systemic for its use. We have noticed that commonest drug induced disease was induced by the most common suspected medicines and the results are volatile with various published studies. [10, 14] In our study findings the DIG condition resulted due to the anticoagulant treatment and the due to the use of non-steroidal anti-inflammatory drugs (NSAIDs). As of the findings reported by Brvar et al, the DIG is more frequently occurred in patients who are using acetylsalicylic acid and or NSAID^{11,15,16}. The present study is an important step towards the investigation of safety of drugs and to control or determine the side effects. Further inferential investigations may lead to control and assure the drug safety and efficacy.

CONCLUSIONS

The prevalence of DIG is high in local population and it is due to the anticoagulant treatment like NSIAD and acetylsalicylic acid.

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