



INDO AMERICAN JOURNAL OF PHARMACEUTICAL RESEARCH



STUDY OF DISEASE PROFILES IN 2000 PATIENTS ATTENDING TO OUTPATIENT DEPARTMENT OF GENERAL MEDICINE: A CLINICAL PHARMACIST'S OPINION

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ARTICLE INFO

Article history

Received 18/05/2017

Available online

14/06/2017

Keywords

Ailments.

Clinical Pharmacist,

Counselling,

Disease Prevention.

ABSTRACT

Background: The major ailments that command our attention today are Heart diseases, Stroke, Diabetes, AIDS, Cancer and mental disorders and, these are the object of our fears, While the physical symptoms are the leading reason for outpatient visits, a substantial proportion of physical complaints and minor illnesses remain poorly understood. Data shows that OPD visits for non-specific (62million) is more than for the known chronic ailments (17million) ⁽¹⁾. The purpose of our study was to determine the prevalence of symptoms and diseases in outpatient departments of general medicine in a tertiary care hospital. **AIM –** To Study the disease profiles in 2000 patients attending to outpatient departments of General medicine Government General Hospital, Guntur: A Clinical Pharmacist's opinion, between Februarys to June 2016. **OBJECTIVE:** To identify the prevalence and incidence of symptoms, diseases in common population. **METHOD:** The present study was a Non experimental prospective study conducted at Government General Hospital, Guntur during the period from February to June 2016. Patients attending the general medicine department with age >15 years, Patient's demographic data were collected and evaluated. The collected data was analysed. **RESULTS:** In this study a 2000 patient data was collected and compiled in which minor illnesses account for 51.25% of the problems, which include Headache, Acid peptic disease, Myalgia's, Fever etc. in the order of presentation. The major illnesses which include Diabetes Mellitus, Hypertension, Gastritis, Cerebrovascular accident, etc. accounts for 33.60%. 15.15% diseases account for rare illnesses related to different systems which include Gastrointestinal, Respiratory and Central Nervous System. **CONCLUSION:** Minor ailments are predominantly seen than major diseases in Out-patient visits, because patients who participated in this study are from low socio economic status who lack knowledge about health care measures, so clinical pharmacists can provide counselling to patients about their dietary habits, personal hygiene, and disease prevention modalities and most importantly about their medications and side effects can reduce the morbidity.

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Please cite this article in press as **K.Sai Sasank et al. Study of Disease Profiles in 2000 Patients Attending to Outpatient Department of General Medicine: A Clinical Pharmacist's Opinion. Indo American Journal of Pharmaceutical Research. 2017;7(05).**

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INTRODUCTION

Epidemiology is the study and analysis of health-related states or events, and the application of this study to the control of diseases and other health problems. Prevalence is a statistical method referring to the number of cases of a disease that are present in a particular population at a given time, whereas Incidence indicates the number of new cases that occur in a given period of time.

Hypertension

The third NHANES (National Health and Nutrition Examination Surveys) reported that the prevalence of hypertension raises significantly with increasing age in all sex and race groups. The age specific prevalence was 3.3% in white men (aged 18-29 y); this rate increased to 13.2% in the group aged 30-39 years. The prevalence further increased to 22% in the group aged 40-49 years, to 37.5% in the group aged 50-59 years, and to 51% in the group age 60-74 years ⁽²⁾.

Diabetes Mellitus

Diabetes is a group of metabolic diseases characterized by hyper glycemia resulting from defects in insulin secretion, insulin action, or both. The chronic hyper glycemia of diabetes is associated with long-term damage, dysfunction, and failure of different organs, especially the eyes, kidneys, nerves, heart, and blood vessels. Prevalence of diabetes worldwide by 2000 is 171,000,000 and by 2030, its prevalence is projected to be 366,000,000 ⁽³⁾

NEUROLOGICAL DISORDERS

Prevalence and incidence rates of common disorders including epilepsy, stroke, Parkinson's disease and tremors determined through population-based surveys show considerable variation across different regions of the country. The prevalence rates of the spectrum of neurological disorders from different regions of the country ranged from 967-4,070 with a mean of 2394 per 100,000 population, providing a rough estimate of over 30 million people with neurological disorders (excluding neuro infections and traumatic injuries)⁽⁴⁾

STROKE

Globally 15 million people have an acute stroke every year and one third of them die secondary to stroke events. Most research on stroke prevention and treatment is done in Developed countries, yet more than 85% of strokes occur in developing countries. In particular, stroke remains an under recognized cause of death and disability in South Asia. Stroke Morbidity and Mortality in India ⁽⁵⁾:

- Prevalence 90-222 per 100,000 (Dalal 2007)
- 102, 620 million deaths (Nongkynrih 2004)
- 1.44-1.64 million cases of new acute strokes every year (WHO 2005, Murthy 2007)
- 6,398,000 DALYs (WHO 2009)
- 12% of strokes occur in the population aged <40 years (Shah + Mathur 2006)
- 28-30 day case fatality ranges from 18-41% (Dalal 2008, Das 2007)

CONGESTIVE HEART FAILURE

Heart failure (HF) is a chronic disease characterized by the inability of the heart to pump an adequate amount of blood to achieve the demand of the different organ systems and/or doing so at increased filling pressures. It is a serious condition representing the end-stage of a myriad of other cardiac diseases without a curative treatment. Heart failure (HF) is a common cardiovascular condition with increasing incidence and prevalence. In India coronary artery disease, diabetes, hypertension, valvular heart diseases and primary muscle diseases are the leading causes for heart failure. Rheumatic heart disease is still a common cause of heart failure in Indians⁽⁶⁾.

EPILEPSY

Epilepsy is one of the most common of the serious neurological disorders. About 50 million people worldwide have epilepsy and 90% of them are from developing countries. Epilepsy is more likely to occur in young children or people above 65 years of age; however it can occur at any time. At least 8% of the general population will have at least one seizure and not have epilepsy. The rate of recurrence of a first unprovoked seizure within 5 years ranges between 23% and 80%. The age adjusted incidence of epilepsy is 44 per 100,000 people in a year.

Each year about 125,000 new epilepsy cases occur; of these, 30 % are in people younger than age 18 at the time of diagnosis. About 10 million persons with epilepsy are there in India. There are very few incidence studies from India, and the most recent one suggests an age standardized incidence rate of 27.3/100,000 per year. It is estimated in various studies that the overall prevalence of epilepsy in India is 5.59-10 per 1000⁽⁷⁾

CHRONIC KIDNEY DISEASE

Chronic kidney disease (CKD) is a condition characterized by a gradual loss of kidney function over time. Prevalence of CKD was observed to be 17.2% with ~6% have CKD stage 3 or worse. In India, given its population >1 billion, the rising incidence of CKD is likely to pose major problems for both healthcare and the economy in future years. Indeed, it has been recently estimated that the age-adjusted incidence rate of ESRD in India to be 229 per million population, and >100,000 new patients enter renal replacement programs annually in India ⁽⁸⁾

Headache

Headache as the most common neurologic symptom, is considered a painful, disabling condition affecting all age groups worldwide. According to the findings of Stovner et al the total prevalence of active headache disorders is 46% in the adult population with tension type headache (TTH) commonly diagnosed in 42% of adult patients and migraine in 11%. This highly prevalent disorder is shown to have a major impact on patients' job performance and quality of life, leading to an economic burden on society⁽⁹⁾.

COLD

The common cold is any benign and self-limiting illness presenting with nasal stuffiness and discharge, combined with any of the following symptoms; sneezing, sore throat, and cough.

Rhinitis is chronic or recurrent sneezing and/or runny or congested nose.

According to NCHS (National Centre for Health Statistics) annually 62million Common Cold are seen alone in United States of America⁽¹⁰⁾.

COPD

The overall incidence of COPD in persons 40 years and older was 2.92/1000PY. The incidence of COPD was higher in men than in women (with a relative risk (RR) of 1.5-fold higher in men). The incidence increased almost 10-fold from 0.78/1000PY at age 40–44 to 6.82/1000PY at age 75–79. The incidence rate of COPD was much higher in smokers compared to non-smokers and this for all age categories and in both sexes⁽¹¹⁾.

Fever of unknown origin (FUO)

The prevalence of FUO among adult hospitalized patients is reported to be 2.9%⁽¹²⁾. The spectrum of FUO aetiology may include more than 200 diseases⁽¹³⁾. According to studies conducted to date, the diseases taking part in FUO Aetiology and their rates are as follows: infections (21–54%), non-infectious inflammatory causes (13–24%), neoplasms (6–31%) and other causes (4–6.5%)⁽¹⁴⁻¹⁶⁾. The incidence of various causes differ with geographical, age and sex difference and development level of countries and the experience of clinicians.

Indian Scenario

Infectious diseases notably tuberculosis has been the most important cause of FUO in our country in all the studies published⁽¹⁷⁻²⁰⁾. Among non-infectious causes autoimmune disorders and neoplasm are fast becoming important differential diagnosis.

ROLE OF CLINICAL PHARMACIST IN EPIDEMIOLOGICAL STUDIES⁽²¹⁾

Clinical pharmacists: Provide a constant process of patient care that safeguards the appropriateness, effectiveness, and safety of the patient's drug use. Consult with the patient's physician(s) and other health care provider(s) to grow and implement a medication plan that can meet the overall goals of patient care established by the health care team. Apply specialized knowledge of the scientific and clinical use of medications; including medication action, dosing, adverse effects, and drug interactions, in performing their patient care activities in collaboration with other health care professionals.

- Providing population-based care.
- Developing disease prevention and control programs (including medication safety programs) in institutions and communities
- Developing health-education policies and programs within their institutions that address the needs of patients, other health care professionals, community leaders, and the public
- Collaborating with state and local authorities, including local and state health departments and boards of health, to address local and regional health care needs (including environmental hazard and emergency preparedness programs)
- Advocating for sound legislation, regulations, and public policy regarding disease prevention and management, and Engaging in population-based research and initiating campaigns to disseminate new knowledge.

Patient Education and Counselling

The human and economic consequences of inappropriate medication use have been the subject of professional, public, and congressional discourse for more than two decades.⁽²²⁾

Lack of sufficient knowledge about their health problems and medications is one cause of patients' nonadherence to their pharmacotherapeutic regimens and monitoring plans; without a knowledge, patients cannot be effective partners in managing their own care. The pharmacy profession has accepted responsibility for providing patient education and counselling in the context of pharmaceutical care to improve patient adherence and reduce medication-related problems⁽²³⁾

Providing pharmaceutical care entails accepting responsibility for patients'

Pharmacotherapeutic outcomes. Pharmacists can contribute to positive outcomes by educating and counselling patients to prepare and motivate them to adhere to their pharmacotherapeutic regimens and monitoring plans Pharmacists should also seek opportunities to participate in health-system patient-education programs and to support the educational efforts of other health care team members. Pharmacists should collaborate with other health care team members, as appropriate, to determine what specific information and counselling are required in each patient care situation. A coordinated effort among health care team members will enhance patients' adherence to pharmacotherapeutic regimens, monitoring of drug effects, and feedback to the health system⁽²⁴⁾

AIMS AND OBJECTIVES

AIMS – To Study the disease profiles in 2000 patients attending to outpatient departments of

Government General Hospital, Guntur: A Clinical Pharmacist's opinion, between February to June 2016.

OBJECTIVES

- To identify the prevalence and incidence of symptoms, diseases in common population.

PLAN OF WORK

- To include all the patients who visit the outpatient department of General Medicine at Government General Hospital Guntur.
- Patients aged above 15 years were included in the study.
- To collect the patients details such as demographic data, patient medication data.
- To evaluate the collected data from the outpatient departments of Government General Hospital, Guntur.
- To determine the prevalence and incidence of medical disorders and diseases in outpatient Department of general medicine

METHODOLOGY

Study design: A Non-experimental prospective observational study.

Study period: 6months i.e. from 1st February to 30th June 2016.

- Study is conducted in Government General Hospital, Guntur, A 1300 bedded tertiary care hospital.
- Patients attending the General Medicine outpatient department with aged more than 15 were evaluated.
- Patient's data including demographic data, medication chart is collected
- The collected data was analysed for the prevalence and incidence of medical diseases and disorders
 - Evaluation of patient's demographics and treatment chart.

INCLUSION CRITERIA

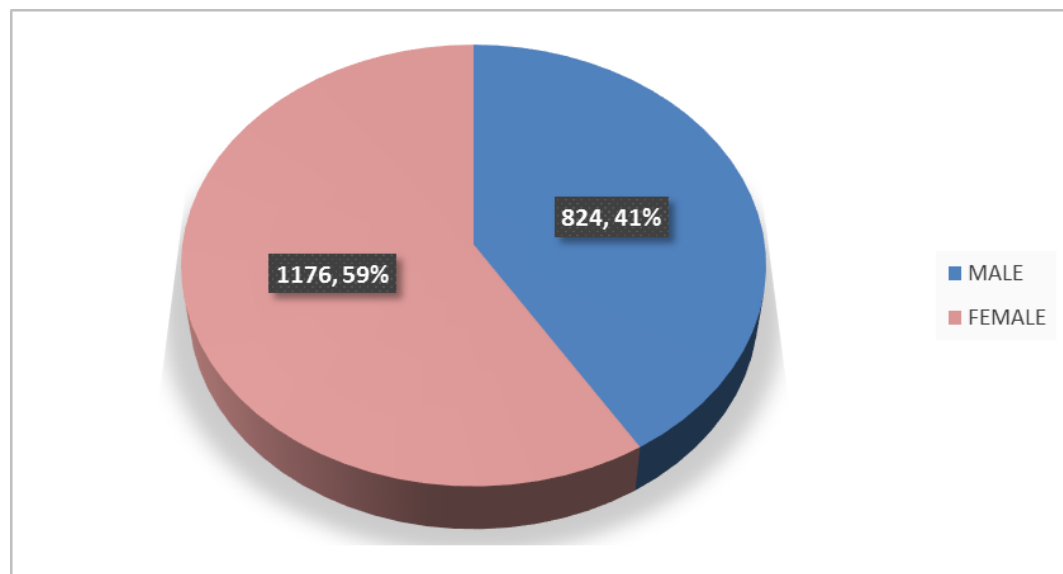
All the outpatients of General medicine department age >15 years of Government General Hospital, Guntur.

EXCLUSION CRITERIA

All the patients of other outpatient departments were excluded from the study.

RESULTS

- Total number of population = 2000
- Number of men = 824
- Number of women = 1176

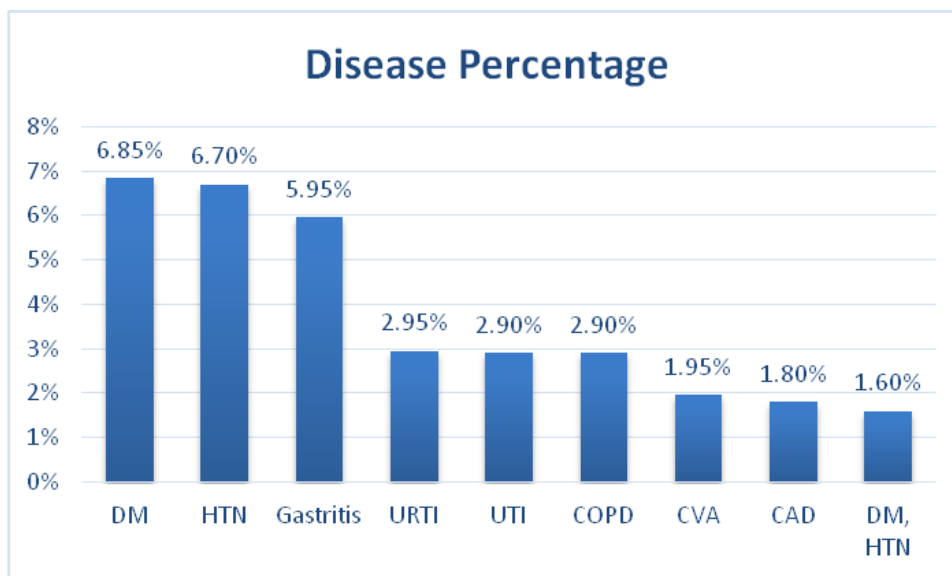


Gender wise distribution

Total number (n)=2000

DISEASE WISE DISTRIBUTION.

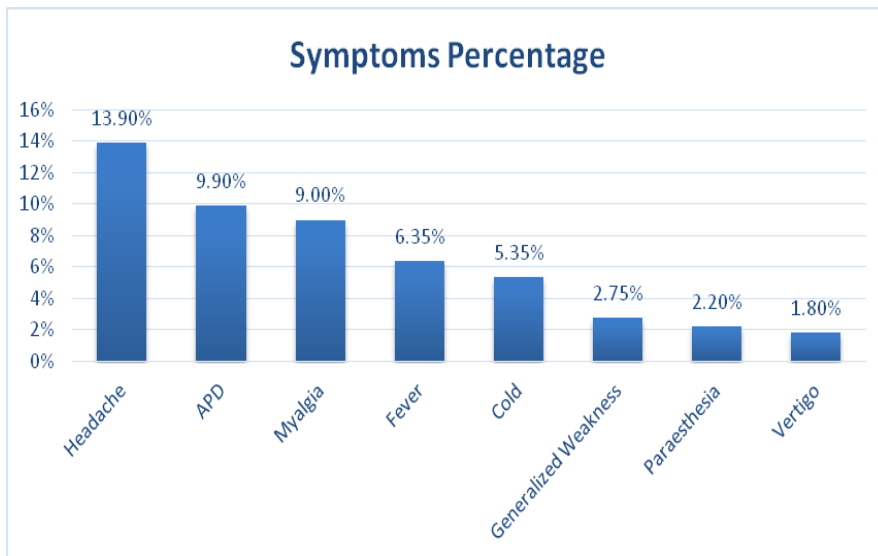
Diseases	Male	Female	Total	Percentage
DM	57	80	137	6.85%
HTN	64	70	134	6.70%
Gastritis	64	55	119	5.95%
URTI	18	41	59	2.95%
UTI	21	36	58	2.90%
COPD	28	30	58	2.90%
CVA	27	12	39	1.95%
CAD	16	20	36	1.80%
DM, HTN	10	22	32	1.60%
Total	305	366	672	33.60%



The total percentage of diseases is 33.60%.

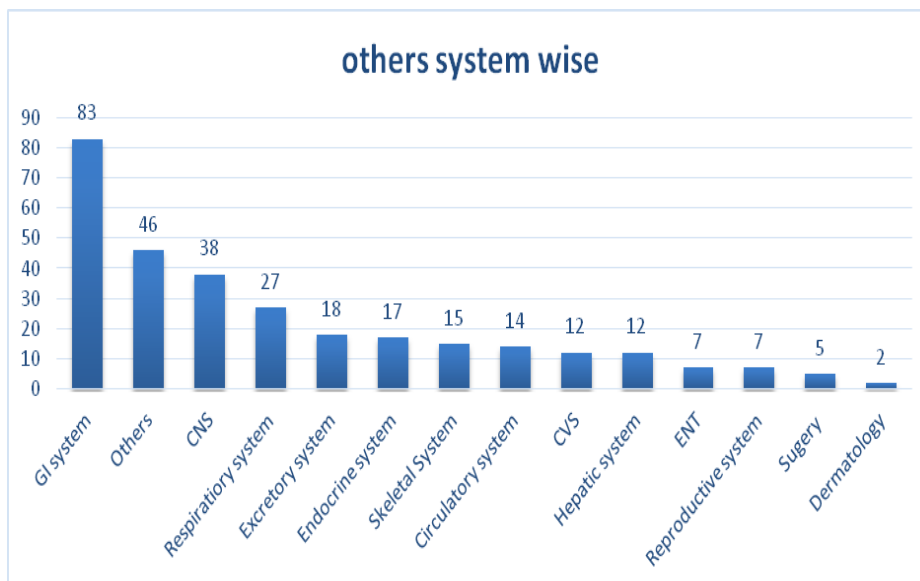
SYMPTOMS WISE DISTRIBUTION.

Symptoms	Male	Female	Total	Percentage
Headache	53	225	278	13.90%
APD	87	111	198	9.90%
Myalgia	66	114	180	9.00%
Fever	58	69	127	6.35%
Cold	46	61	107	5.35%
Generalized Weakness	35	20	55	2.75%
Paraesthesia	21	23	44	2.20%
Vertigo	14	22	36	1.80%
Total	380	645	1025	51.25%



The total percentage of symptoms is 51.25%.
OTHER RARE SYSTEM WISE DISTRIBUTION.

System	Male	Female	Total
GI system	46	37	83
Others	25	21	46
CNS	17	21	38
Respiratory system	16	11	27
Excretory system	8	10	18
Endocrine system	1	16	17
Skeletal System	3	12	15
Circulatory system	0	14	14
CVS	10	2	12
Hepatic system	12	0	12
ENT	3	4	7
Reproductive system	1	6	7
Surgery	4	1	5
Dermatology	0	2	2
Total	146	157	303
Percentage			15.15%



The total percentage of others is 15.15%.

DISCUSSION

From our study that has conducted in the general medicine department of Guntur

Government Hospital, Guntur to evaluate the “Study of disease profiles in 2000 patients attending to outpatient department of general medicine: A clinical pharmacist’s opinion” have total number of participants were 2000 patients. The data was collected in the general medicine outpatient departments during the study period from February 1st to July 31st 2016. From 2000 patients, 824 (41%) were men and 1176 (59%) were women.

According to the age wise distribution, irrespective of gender 41-50 years age group has shown the higher prevalence (22.4%) and the low prevalence was found in >70 years of age group (2.9%). According to age wise distribution, with respect to gender in male population 41-50 years age group has the higher prevalence and low prevalence was found in >20 years of age group (5.34%) and in female population 31-40 years age group has shown the higher prevalence (25.09%) and the low prevalence was found in >70 years of age group (1.11%).

Out of all the evaluation made in the outpatient department of general medicine minor illnesses are predominantly found (51.25%) 1025 patients and diseases accounts for (33.60%) 672 patients and others account for (15.15%) 303 patients.

According to gender in minor illnesses, female population accounts for (62.93%) 645 patients and male population accounts for (37.07%) 380 patients.

According to gender in major diseases, female population accounts for (54.46%) 366 patients and male population accounts for (45.39%) 305 patients.

In this study a 2000 Patient Data was collected and compiled in which Nutritional and Minor illnesses accounts for (51.25%) of the problems, which include Headache, Acid peptic disease, Myalgia, Fever etc. in the order of presentation. The Major illnesses include Diabetes Mellitus, Hypertension, Gastritis, Cerebro Vascular Accident etc. in the order of presentation accounts for (33.60%). (15.15%) accounts rare Major illnesses related to different systems which include Gastrointestinal, Respiratory, and Central Nervous System.

CONCLUSION

Major diseases account for more than half of the Out-Patient visits for treatment in urban population, whereas in rural population nutritional deficiencies and minor illnesses are more predominantly seen.

In this study a 2000 patient data was collected and compiled in which nutritional and minor illnesses account for 51.25% of the problems, which include *Headache, Acid peptic disease, Myalgia's, Fever* etc. in the order of presentation. The major illnesses which include *Diabetes Mellitus, Hypertension, Gastritis, Cerebrovascular Accident*, etc., in the order of presentation account for 33.60%. 15.15% diseases account for rare illnesses related to different systems which include Gastrointestinal, Respiratory, and Central Nervous System.

The results obtained from our study vary from the WHO statistics, probably because the patients who participated in this study are from rural areas and low socio economic status. To overcome these pitfalls, A prospective multicentric study should be conducted in large number of population which includes all socio-economic classes of people.

Nutritional deficiencies and minor illnesses appear to be more common in rural areas than the urban areas due to the poor dietary habits, and their poor knowledge about hygiene. Also lack of knowledge about health care measures and misconceptions in health care contributes to morbidity in rural areas.

Clinical pharmacist’s who are health care management professionals can provide counselling to the patients about their dietary habits, personal hygiene, disease prevention modalities and most importantly, counselling patients about their medications and their side effects. By following the above management strategies, Clinical pharmacist’s can aid Physician’s in reducing the time to treat the patients and enhance counselling.

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