

Research Article

Outpatient Prescription Practice of a Family Physician in Rural Areas of Andhra Pradesh: Pilot Study

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Abstract: This study recognizes the three common morbidities encountered by a family physician and to describe the role of family physician in preventing, diagnosing and managing these morbidities. The study also focus light on prescribing practices of a Family Physician for Outpatient in evening clinic is important for the development of the rural medical and health services. This is an observational study based data from an evening Clinic, Sub Urban area of Nellore town, Andhra Pradesh. The study was conducted prospectively during December 2013 to January 2014. The Study design is cross sectional survey of the OPD attendees the Sample size and sampling method is a total of 100 participants were included in the study. Inclusion criteria include first five to ten patients attending the OPD daily, both male and female patients aged between 5 years – 75 years. Exclusion criteria include patients aged below 5 and above 75. Descriptive data was presented as mean, standard deviation and actual numbers. Statistical analysis was performed using Microsoft Excel spreadsheet version 7. Detailed analysis of socio demographic factors of the study participants was done. In our study 100 patients were enrolled, out of them 60 were males and 40 females. The mean age group of patients was 34.81 ± 13.77 yrs. 85% of the patients were visiting the clinic for the first time. Among them 40% of patients were lost to follow-up. 10 patients were in pediatric age group. Infections, Diabetes with Hypertension and Acid peptic diseases were the three most common diseases in the patients attending the Evening Clinic with majority patients (38%) were reported with respiratory tract infections. This study also concludes the importance of a Family physician in the society.

Keywords: Outpatient, Prescription practices, Family physician, Infections.

INTRODUCTION

Nellore and its surroundings were known for its agricultural and economically developing province in Andhra Pradesh, Family physician is the first contact person for all the health problems in rural and some of the urban clinics. Family physician can resolve most of the diseases by examining patients in a systematic way by following a protocol. This helps in treating patients cost effectively and reduces unnecessary referrals. It also helps specialist doctors to give more time to those patients who require their expertise opinion and skills. Family physicians are more easily approachable by the society. Family Physicians treat a wide variety of illnesses at a primary health care level and this makes them to use a wide array of drugs of different classes.

At present, no guidelines are being followed by GPs for prescribing drugs in India [1]. We need to recollect the three magic weapons (Rural Cooperative Medical Schemes, barefoot doctors and township health centers) of the rural health services of China by WHO [2]. They are the primary health care providers in the field of public health. This is particularly true in rural and sub

urban areas, especially in a developing country like India where the doctor to patient ratio is 1:1953 [3-4].

This study is done to identify three most common diseases seen in outpatient department and to treat accordingly. In the study – age, sex, socio economic backgrounds were analyzed. How these factors contributed to the disease were studied. In the management of the patients – age, gender & socio economic factors were also considered. Patients were investigated wherever necessary. This helped to prescribe antibiotics judiciously based on the investigation results. Quantitative audits are concerned with quantifying various facts of drug therapy use within a health care system area group whereas qualitative audits compare drug use or practice with predetermined standards or criteria [5].

Objective

The study was conducted to identify the three common morbidities encountered by a family physician and describe the role of family physician in preventing, diagnosing and managing these morbidities.

MATERIALS AND METHOD

Study setting

Outpatient Evening Clinic (Pharmacy Outlet), Sub Urban area of Nellore city, Andhra Pradesh.

Study period

The study was conducted prospectively during December 2013 to January 2014

Study design

Cross sectional survey of the OPD attendees

Sample size and sampling method

A total of 100 participants were included in the study. Every day, first five to ten patients attending the OPD were included in the study.

Inclusion criteria

Both male and female patients aged between 5 years – 75 years.

Exclusion criteria

Ages below 5 and above 75 were not included.

A verbal informed consent was obtained before collecting the data from the Patients.

Statistical Analysis

Descriptive data was presented as mean, standard deviation and actual numbers. Statistical analysis was performed using Microsoft Excel spreadsheet version 7. Detailed analysis of socio demographic factors of the study participants was done.

RESULTS

In our study 100 patients were enrolled, out of them 60 were males and 40 females. The mean age group of patients was 34.81±13.77 yrs. 85% of the patients were visiting the clinic for the first time. Among them 40% of patients were lost to follow-up. 10 patients were in pediatric age group. General information regarding, gender, weight, height, education, occupation, socio-economic status, personal habits, other diseases, consulting time, monthly income, and demographic characteristics was shown in Table 1.

Table 1: Patient characteristics

Age (Yrs)	34.81±13.77
Gender (M/F)	60/40
Pediatric age group	10
Height (Cm)	161.3±14.18
Weight (Kg)	67.2±14.57
Smokers (Y/N)	42/58
Alcoholics (Y/N)	33/67
OPD Status (New/Old)	85/15
Consulting time (Sec)	10.28±4.23
Monthly Income (INR)	13180±8028
Income (≤5000 INR/month)	09
Illiterates	08
Housing	
Pucca	26
Kacha	18
Own House	18
Rent	38
Drinking water	
Closed Well	15
Open Well	04
Hand Pump	28
Tap	50
Mineral water	03
Diagnosis	
DM	05
HTN	03
DM+HTN	12
Infections	38
APD	09
Referrals	06

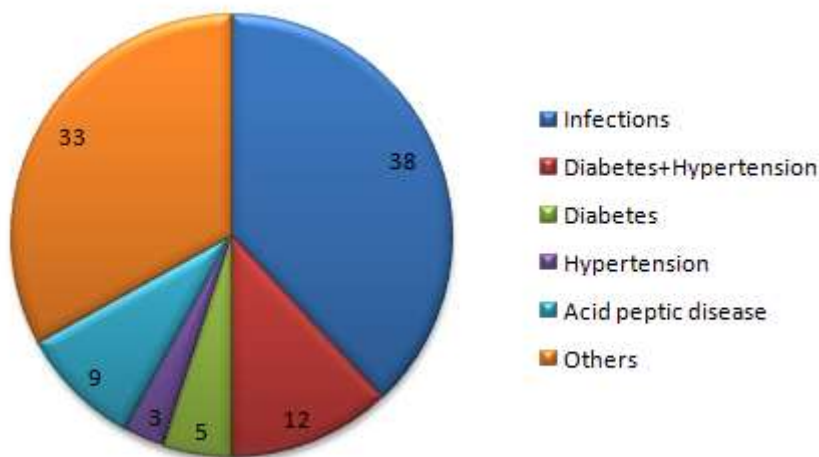


Fig-1: Percentage of various diseases

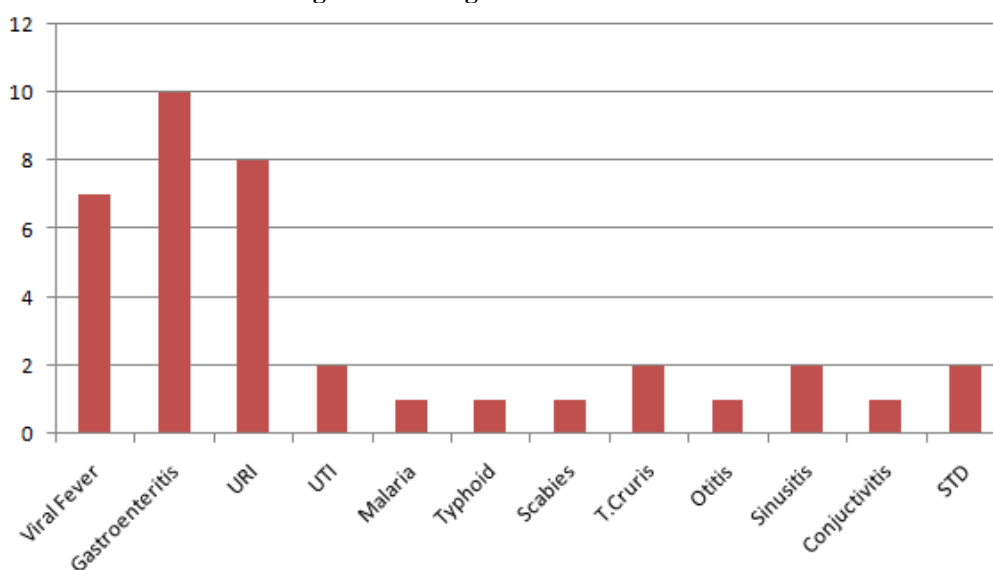


Fig-2: Frequency of some diseases

Out of 100 patients, 38% were suffering with infections which include sinusitis, otitis externa, conjunctivitis, pharyngitis, tonsillitis, gastroenteritis, amoebiasis, viral infections, malaria, typhoid, urinary tract infections, white discharge, scabies, herpes simples and tinea infestations. 12% had both diabetes and hypertension, 5% patients had only diabetes 3% had only hypertension and 9% were having, acid peptic disease. The diagnosis of remaining 33% of patients includes low backache, osteo arthrits, neck pains, insomnia, headache, depression, apthous ulcers, dog bite, vertigo, dysmenorrheal, bronchial asthma, fissure in ano, anxiety, erectile dysfunction, acne vulgaris, constipation, etc.

DISCUSSION

In our present study we established that Infections, Diabetes with Hypertension and Acid peptic diseases were the three most common diseases in the patients attending the Evening Clinic in sub-urban area of Nellore City. The following issues concerning the etiology, social determinants, diagnosis and

management of three common diagnoses were discussed in the context of role of family physician.

On an average 3.1 drugs were prescribed per prescription which was similar to the studies conducted in 1996 by Baqui and Choudhary [6] and 3.31 in another study conducted in 1998 by Rahman *et al.* [7] Infections are very common in Indian sub urban populations, of which acute respiratory, infection (ARI), Urinary tract Infections, Fevers like Malaria, Typhoid and Viral fevers are very common in age between 5 and 75 years. Respiratory tract infections are the commonest illness in a rural area. This might be the reason that at least one antimicrobial agent is prescribed in 78% of prescriptions studied. The results of our study are comparable to the similar study done in the Iran [8]. Patients who presented to the hospital on the first day of Infection, with generalized body pains and without any other localizing symptoms were treated with oral Paracetmol. Patients were asked to review after three days if they are not better. Patients who presented after three days of infection, with localized symptoms and

with temperature $>101^{\circ}\text{F}$ had under gone blood investigations (TC, DC, ESR, Platelets, MP, widalTest) and urine examination. All those patients with localizing infection, elevated total WBC counts, were treated with oral antimicrobial agents such as Amoxycillins, Cephalosporin, Quinolones, chloroquine, primaquine, terbinafine, clotrimazole etc. were prescribed depending upon the type of infections. Cefixime is the most commonly prescribed antimicrobial agent among cephalosporins. This is similar to the findings of drug utilization studies done in India [9-10]. Many risk factors for infections have been identified which include not only the climatic conditions but also the poverty, malnutrition, poor housing conditions, indoor air pollution such as parental smoking, absence of ventilation, overcrowding, Industrialization, social cultural values, overuse and misuse of antibiotics, and lack of awareness to both preventative (including immunization) and curative health services.

Hypertension and diabetes, the two major global risks for mortality, are on a rapid rise in developing nations. It is predicted that by 2030, India's diabetes burden will be almost 87 million people [11]. Additionally, there is an increasing prevalence of hypertension in the Indian population, especially in the urban areas. Elevated blood pressure (BP) has been linked to ischemic heart disease, peripheral vascular diseases, stroke, myocardial infarction, and renal failure. Hypertension and diabetes are important risk factors for cardiovascular disease. In our study we found that 12% of patients had both diabetes and hypertension, 5% patients had only diabetes 3% had only hypertension. It is possible that lack of exercise, sedentary life style, high salt diet (fast foods & Junk foods), family and work stress is responsible for Hypertension and Diabetes in our study group. Patients with Diabetes were treated with Metformin, Glimeperide, Gliclazide, Insulin Glargine, Mixtard Insulin. Whereas for Hypertension drugs like telmisartan, Losartan, Hydrochlorothiazide, Amlodipine.

We also found that and 9% of patients were having, acid peptic disease. Peptic ulcer disease is a group of disorders characterized by the presence of ulcers in any portion of gastrointestinal tract (GIT) exposed to acid in sufficient concentration and duration. Peptic ulcer holds both gastric and duodenal ulcers and has been a major threat to the world's population, with a substantial morbidity. In our study group it is possible that irrational use of NSAIDs, smoking, alcohol, irregular diet habits, spicy foods, stress could contribute to this much percentage of acid peptic disease. Patients should be strongly counseled to discontinue above risk factors.

It is observed that, most of these patients belong to lower middle class status with unhealthy surroundings. As a family physician apart from treating Infection we need to educate the patient regarding disease in simple

understandable language. We need to educate the patient to prevent recurrence and avoid spreading of infection, personal hygiene, having healthy food habits, keeping the surroundings clean, using mosquito nets. Along with patients, we have involved family members in counseling part. For Lifestyle diseases like Diabetes and Hypertension we have advised Diabetic Diet, low salt diet, compliance of drugs, importance of exercise in the form walking, regular follow up. Also explained how to manage the mild side effects of drugs, hypoglycemia. We have also suggested diabetic patients before coming for the follow up they use to get basic blood investigations.

CONCLUSION

The good history and physical examination helps to investigate the patient according to clinical diagnosis. This is cost effective to patient and avoids irrational prescription of drugs by the physician. Along with the medicines, patients need to be educated regarding personal hygiene, dietary habits, exercises and nutritional supplements which reduce the incidence of infections. Infections, Diabetes with Hypertension and Acid peptic diseases were the three most common diseases in the patients attending the Evening Clinic with majority patients (38%) were reported with respiratory tract infections. This study also confirms the importance of a Family physician in the society who can resolve most of the diseases by examining patients in a systematic way by following a protocol. This helps in treating patients cost effectively and reduces unnecessary referrals.

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