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Effect of Registered Medical Practitioner Treatment (RMP) on Rural Area Population-a Pharmacovigilant Approach

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ABSTRACT

In developing countries like India, majority of healthcare is borne to private sector, resulting that most of the people levy on local /available unrecognized medical practitioners. The RMP's are very popular in the rural areas and urban slums because they are the primary contact in the medical emergencies that leads to some drug related errors, adverse effects and interactions. The quality of life in developing countries can be improved by enhancing the standards of medical treatment at all levels of the health care delivery system. This can be achieved through interventions, continuous medical education programs, effective implementation of therapeutic strategies. Our investigation is to study about the impact of RMP's treatment and to ensure the drug safety by clinical pharmacy services in rural India.

Keywords: RMP's, Health Care, Therapeutic Strategies, Rural Area Population.

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INTRODUCTION

Irrational and inappropriate use of drugs is a leading concern in both developed and developing countries[1,2,3]. In developing countries like India, the poor socioeconomic status, high cost of modern medicine and unavailability of physicians in rural areas create crisis for accessing the healthcare services which may prime to increased self-medication use[4],so rely upon the services provided by RMP's. There is no formal qualification for registered medical practitioners (RMP's) who provide 80%ofoutpatientcare. They are relatively young and a majority of them sometimes don't have even a proper educational background. India is also looking the qualified medical practitioners other than MBBS, BDS, BAMS, BHMS, BNYS, BUMS and BVSC, named as RMP doctors. It should not be confused with the term registered medical practitioner, it should stands for rural medical practitioners, some others are called as private medical practitioners (PMP).So the term rural medical practitioner is suitable for those who are not registered as registered medical practitioners. Irrational prescribing may leads to improper treatment, which prolongs the illness, and harm to the patient[5]. Excessive use of injections, particularly prevalent in low-income countries, is a widespread hazard to health in countries where injection safety cannot be assured. Irrelevant use of antibiotics for every indication can cause drug resistance[6]. RMPs mostly prescribe glucorticosteroids, high percent of antibiotics for common indications causing multiple serious side-effects. Most misuse is due to the easy availability of the drug over the counter and a lack of awareness of the side-effects by both the patient and the prescriber[7]. The majority of the RMPs live in the village for their practice, easily accessible to community. Hence over78% of doctors think that RMP's use improper medication, and give unnecessary injections/iv leading to wrong pattern of treatment and diagnosis. In rural areas the public health system (PHS) is plagued with state of old infrastructure and poor supply of drugs and equipment. However the private doctors gives the best and more than 80% of health care, in the hard to reach rural areas, it should be based on scientific knowledge but made easily accessible and available to the people at a cost that they can afford, and suitable strategies should be developed by the government towards this.

Rural Health Infrastructure of Andhra pradesh

Andhra Pradesh is functioning around sub centres 7659, primary health care centres 1069 and community health care centres 179. Despite elaborate network of facilities in the form of sub centres, primary health centres (PHC) and community health centres (CHC), only 20% of those seeking outpatient services and 45% of those seeking indoor treatment are a vailing public service.

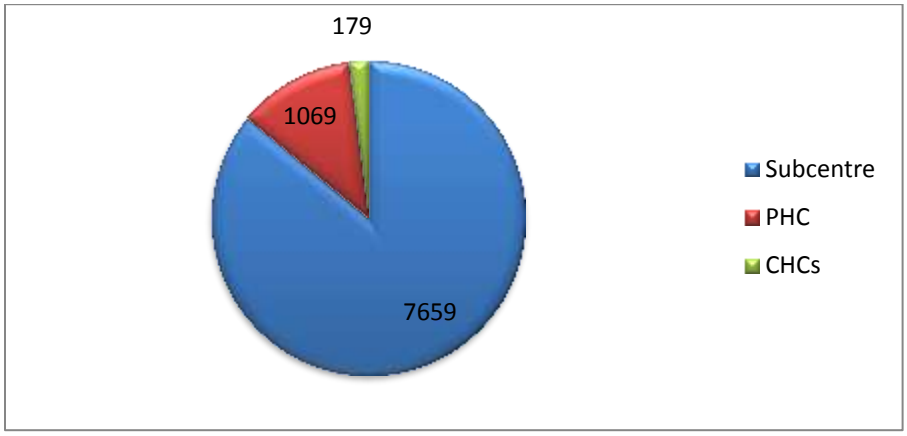

Figure 1: Andhra Pradesh's Functioning Subcentres, PHC, and CHC' S

According to a study in Andhra Pradesh about 22 percent of RMPs were with degree or above qualifications and 40 percent were with 12 years of education. Only 4 percent of them had less than secondary school education. About 40 percent of RMPs in the towns and Mandal HQs were graduates. In contrast only about 14 percent of RMPs were graduates in the villages[8,9].

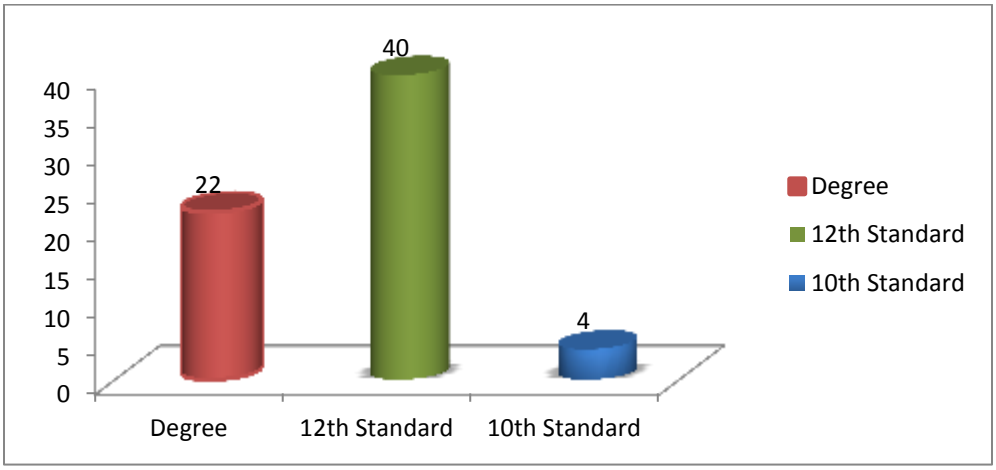

Figure 2: Registered Medical Practitioner's Educational Status

Objectives

The objective of study was to assess the irrational use of drugs and their unwanted effects, and to create awareness in the rural community regarding the clinical pharmacy services and its importance.

MATERIALS AND METHOD

A prospective observational study was conducted in rural areas which are located in korukonda region of east Godavari district in Andhra Pradesh for a period of 4 months (may2015-august2015). A Sample Size of 150 Patients Who are Prone to Different Ailments were Included In Our Study. Data Was Collected from Patients using different questionnaires and conducted interview based on RMP's treatment pattern. A Specially designed adverse reaction

scale called as Naranjo scale was used to assess the category of Adverse drug reactions (ADR's).

RESULTS AND DISCUSSION

Atotalof150personswereinterviewed whichincludes11 no's RMPs, 133 rural patients and 4 Qualified medical professionals, 2 Nursing staff. The participants were assured that their response will be used only for research (article) purpose and their recognition will not be revealed and confidential strictly. Out of 133 patients a total no of 52 patients (i.e. 39%) are affected with various adverse drug reactions. Among those most of them were extra pyramidal symptoms (dystonia) due to metoclopramide (perinorm inj), pedal oedema due to amlodipine. The least no of adverse drug reactions found with of loxacin, penicillin etc. Many drug reactions have been occurred with the drugs prescribed by qualified medical professionals which were rectified by their further treatment. Whereas several incidents of untreated drug reactions have occurred in case of drugs which were prescribed by unqualified medical practitioners due to lack of pharmacological knowledge. For example metoclopramide is the drug of choice for vomiting's which is prescribed by so many RMP's. But they do not know that it crosses blood brain barrier (mechanism of action).

Table 1: List of drug induced Adverse Drug Reactions found during RMP's treatment

Name of the drug	Adverse drug reactions	No of ADR's identified	Naranjo Scale (Causality Assessment)	
			score	category
Metoclopramide	EPS (dystonia, akathisia)	3	2	Possible
Cefixime	Erythema multiforme	2	3	Possible
Atenolol	broncho constriction	1	0	Unlikely
Spironolactone	Gynecomastia	2	5	probable
Ceftriaxone	Vomiting's	2	4	Possible
Diclofenac	Kidney failure	2	7	Probable
	Abdominal pain	2	3	possible
Ferrous compounds	Metallic taste	3	1	Possible
Chloroquine phosphate	Dizziness	2	0	Unlikely
Tetracycline's	Skin rashes(SJS)	2	6	probable
Penicillin	Anaphylactic shock	1	0	Unlikely
Misoprostol	Severe bleeding	1	9	Definite
Amlodipine	Pedal oedema	4	8	probable
Ofloxacin	Thrombophlebitis	2	4	Possible
Paracetamol	Jaundice	3	7	probable

Ranitidine	Palpitations	2	6	Probable
	chills	2	5	probable
Paracetamol	Gastritis	3	3	Possible
Ceftriaxone	Leucopoenia	2	1	Possible
Ofloxacin	Restlessness	2	6	Probable
	Insomnia	1	0	unlikely
Salbutamol	Hypokalaemia	2	2	possible
Ondansetron	Malaise	2	4	Possible
	Headache	1	9	Definite
Metformin	Metallic taste	1	3	Possible
	Hypoglycaemia	2	7	probable

Naranjo scale: 0-Unlikely. 1,2,3,4-Possible. 5,6,7, 8-Probable.9-Definite.

In rural India the role of RMP's in providing health care is very significant play. Majority of RMP's lives in villages as a medical practitioners, don't have professional qualification in any aspect of medicine either indigenous or allopathic. People in villages go to these practitioners because they are easily available, low cost for treatment and provide affordable service. According to Mitral j *et al,* allopathic medicines were consumed for 99.3% of episodes and major source (53.8%) of medical care was from privatepractitioners[10]. Physicians who are all working in primary health care centre's consider that these unqualified practitioners provide improper medication, wrong diagnosis, and unnecessary usage of iv's leads to serious events. Many drug reactions have occurred with the drugs prescribed by qualified medical professionals which were resolved by their further treatment. Whereas several incidents of untreated drug reactions are have occurred in case of drugs which are prescribed by unqualified medical practitioners. Narayana et al stated that a qualified Physician at the Mandal HQ reported that in 90 percent of cases the treatment given by the qualified doctors and the RMPs is similar. Whether the treatment provided by the RMPs is positively contributing to the well-being of the people or is it causing more damage to their health is the crucial issue. Immediate relief from the suffering seems to be the main gain from RMPs. Inspite of government health care services, availability of doctors and nurses and quarters provided to them, utilisation of government health services is not upto the expected level[6]. Hence government need to focus on this particular aspect and quality of care and invest more in the health care by providing all facilities in rural regions which are difficult to reach common people.

CONCLUSION

The study concluded that irrational prescribing was prominent in rural areas mostly due to unqualified practitioners which results in various unwanted drug reactions. Monitoring of drug

safety can be achieved through effective utilization of clinical pharmacy services that leads to a better health care for the community. An initiative approach by government authorities to encourage clinical pharmacy services in rural area improves patient quality of life. Stringent rules were to be implemented related to RMP activities can decrease adverse outcomes of drugs. We concluded that our study necessitates the need of monitoring programmes for detecting adverse effects by a qualified clinical pharmacist services in rural community set up.

ACKNOWLEDGEMENT

The study was undertaken as a part of the clinical pharmacy activities in rural India but not to criticise any registered medical practitioners who are all serving for uneducated and poor community. I am grateful to the doctors (including RMP's and qualified physician's) who gave valuable information especially about drug related problems and suggestions at their practice duration.

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