



Pharmacoepidemiology and Drug Safety Concept: Indian Scenario

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Introduction

The concept of Pharmacoepidemiology was come in existence in late seventies. It is a specialty which links both clinical pharmacology and epidemiology. This specialty play important role in measurement of success or failure of drug therapy based on various factors which affect use of drugs by the community. In Indian scenario research in pharmacology an important medical specialty has suffered due to many reasons. Shortage of financial support from the administration of many medical colleges, difficulty in procuring and maintaining experimental animals or patients/healthy volunteers are the few reasons have literally pushed many researchers to choose pharmacoepidemiology as their area of research. It doesn't mean that Indian pharmacologists are really having research interest in this sub specialty. It is more for reasons of convenience rather than that of genuine interest.

Research in the Area

As pharmacoepidemiology have a scope for large variety of study designs, no broad research works are being reported by Indian pharmacologists, except quantitative drug utilization studies, which necessitates for hypothesis generation and interventional studies. These reports are absolutely failed to assess the rationality of prescriptions. This may be due to lack of knowledge, lack of thrust in research activity, laziness or over satisfaction, apathy and unwillingness to get involve themselves in quality research work.

Before twenty years, there were many hindrances and limitations which used to restrict the researchers in this particular area. Now the scenario is different. In both qualitative and quantitative research methodology, there is a evidences of rapid strides along with availability of sophisticated statistical analytical methods make it easy to carry out the research. But what actually required is our pharmacologists must give time and keep effort to know the fundamental concepts of epidemiological research and ensure that the basic principles are satisfactorily addressed during planning of study. "Pharmacoepidemiology is a powerful tool that can benefit patients and public health, but only if used appropriately [1]".

The Concept of Drug Safety

Pharmacovigilance is another sub specialty which is useful in assuring the safety of medicines and protecting the consumers from their harmful effects. In Indian scenario, monitoring drug safety is not as simple. This is mainly due to absence of a gold standard for a drug safety surveillance system and variations in culture and clinical practice across countries makes it difficult for India to completely adopt another country's practices. It is essential to adopt a interdisciplinary approach among health science areas towards drug safety.

Adverse drug reactions are undesirable effects of medications that lead to large-scale morbidity and mortality in developed countries [2-4]. However, there is dearth of research that claims adverse drug reactions presence in developing countries such as India. The adverse drug reaction reporting rate in India is below 1% compared to the worldwide rate of 5% [5]. This lower rate might be attributed to the awareness about pharmacovigilance and adverse drug reaction monitoring among the Indian healthcare providers.

Due to poor pharmacovigilance system in India increased the workload and responsibility of physician and other health care team. Most of the time pharmacists will not bring to the notice of health care team about most of the adverse drug reactions occurring in practice. Indian health care system has also failed to give importance to the role of pharmacist along with lack of knowledge among Indian pharmacists with respect to accurate dispensing of medications and prime knowledge about drugs. Moreover, Indian pharmacy curriculum is more focused on industrial technological aspects industry rather than on community/clinical pharmacy. However, things are changing and Pharm. D., course is being taught in many pharmacy institutes in South India. To improve the drug safety concept in India, it is essential for a physicians to know about adverse drug reaction reports of a medicines which are going to be prescribed, informing patients when new drugs are prescribed and to be alert about possible adverse drug reactions etc., along with penalizing physicians and pharmacists involved in prescribing or distribution of banned drugs.

Conclusion

It is essential that Indian pharmacologists must involve in conducting interventional rather than observational studies in further and deeper for which they can find many national agencies and pharmaceutical companies willing to fund such studies. Perhaps, our medical institutes if have a practice of conducting continuous medical education programs and workshops on research methodology of pharmacoepidemiological methods would help in this respect. The entire health care team in Indian health care system must report all adverse drug reaction reports to regulatory authority can help in taking action as soon as possible, and it is also essential to ensure that drugs which are banned worldwide should not available in Indian market.

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