Drug Utilization Study for Acute Illnesses in Village Banggol, Malaysia: The findings of a house hold survey

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Abstract

Governments of developing nations are concerned about the drug utilization in the community. Little is known about the drug use behaviour patterns among the general public in Malaysia. There is no systematic or comprehensive data on the utilization of medicines and patient compliance after they have been marketed and prescribed in the community. A household level, cross – sectional study was undertaken to delineate the utilization of drugs vis-à-vis sources of the medications in village Banggol in the state of Kedah in Peninsular Malaysia. The results showed that the prevalence of morbidity due to acute illnesses was 11.3% and rural Malaysians use drugs properly for common acute illnesses in community setting. This population is aware of the types of medication that are prescribed for episodes of common acute illnesses and they also know how to use and store the drugs properly.

Introduction

Drug utilization (DU) is an essential part of pharmacoepidemiology and these two words are some times used interchangeably (WHO, 2003). The World Health Organization (WHO) defines drug utilization as "the marketing, distribution, prescribing, and use of drugs in society, with special emphasis on resulting medical, social and economic consequences" [1]. Research in the field of drug utilization aims to analyze the developmental trends, of drug usage at various levels in the health care system. Drug utilization data may be used to produce crude estimates of disease prevalence and to plan drug importation, production and distribution, and also to estimate drug expenditures [2]. In the past few decades, marketing of new drugs, variations in the pattern of drug prescribing, concern about the delayed adverse effects of drugs, and increase in the cost of drugs has increased the importance of drug utilization studies. Literature on Malaysian hospital based drug utilization is available but information on community drug utilization studies is sadly neglected. The objective of the present study was to understand and analyze the pattern of usage and drug awareness in village Banggol, Kedah, Malaysia.

Materials and methods

A 3 day community based, cross sectional drug utilization survey was undertaken in Kampung (Village) Banggol, Kedah, Malaysia in November 2008.The study design was cross sectional and it was conducted by using interview method. Sociodemographic characteristics of 382 people belonging to 84 households were obtained by interviewing the head of the family or any other responsible member

using a pre designed, pre tested household interview form. Medical care received for episodes of acute illness (newly diagnosed illness within 15 days prior to the interview except for chronic diseases like hypertension, diabetes mellitus) was recorded. The questionnaire included information concerning the awareness about the drug included the dose, frequency, effect and the appropriate method of storage used. The respondents were asked to show the drugs available in their house to the investigators as a part of surveillance. The study was approved by the Institutional Ethics Committee and confidentiality of the subjects was maintained.

Statistical analysis: The data was analyzed using SPSS version 13. 'Chi' square test was used to analyze the relationship between sociodemographic variables and the awareness about the use of drugs. A 'p' value of 0.05 was considered as statistically significant.

Results

The total population of village Banggol comprised of 382 individuals at the time of study. Majority (97.5%) of the residents were Muslims by religion. The average family size was 5. The major source of income was agriculture (65.3%). This was followed by small-scale business (15.6%) and skilled labour (19.1%). The prevalence of acute illnesses was 11.3% at the time of study. The top three symptoms as reported by the respondents were cough and cold (46.5%, 20), fever (44.2%, 19) and gastroenteritis (9.3%, 4). The average number of drugs prescribed per patient was 3.4 for an episode of acute illness. The cost of treatment was on an average 15 RM (Malaysian Ringgit) for an episode of acute illness. The number of male and female patients suffering from episodes of acute illness was almost equal. The episodes of acute illness were more in people with income below poverty line as compared to those living with income above the poverty line, but the difference was not statistically significant. Majority of the people availed allopathic treatment (93.0%, 40), one person with fever (2.3%) availed treatment from traditional practitioner (Bomoh in local language) and the rest (4.7%, 2) received no treatment for the acute illness. All the drugs prescribed by allopathic practitioner were generic in nature and no drugs with brand name were prescribed in the community. Eighty five percent of the respondents' preferred availing treatment at government primary health care center instead of private practitioners (only 1 private practitioner was practicing in the village) in village Banggol. The four most common medications used in the community were antipyretics and analgesics (30.5%), cough cold mixtures (19.8%), antibiotics (18.6%), antiemetics (14.4%) and rest were miscellaneous drugs. It was also observed that 37 patients (84.1%) were aware of the names of drugs that were prescribed to them along with their usage schedule and purpose of use. They were also aware about storage requirements of the drugs prescribed to them. A total of 30 patients (69.8%) showed compliance with the medications prescribed to them and completed the entire course of medication meant for an episode of acute illness. The remaining 13 (30.2%) patients did not complete the treatment. The most common reason for not completing the treatment was recovery from illness (76.9%, 10), side effect related to medication (15.4%, 2), forgetting to take the drug (7.7%, 1).

It was observed that 95.2 % of the drugs used in acute illness were within the expiry date. The rest of the drugs though present with in a house were not in use and people in general were aware of the importance of expiry date of the drugs. Comparison of the drug awareness with socio demographic factors like education and income revealed no statistical significance.

Discussion

Outcome of medical care depends upon drug utilization factors prevalent in the society and at home. This fact has drawn the attention of researchers and house hold drug utilization survey has become a fascinating field of research. Community based drug utilization surveys form a very important point of contact between the health care provider and the people of a particular region. It also provides an insight into the nature of health care delivery system. The present study is a first of its kind, community drug utilization study for acute illnesses that has been carried out in Malaysia. Therefore, some of the outcomes of this study may be an eye-opener to health care practitioners and researchers practising & studying in Malaysia. The average number of drugs prescribed for an episode of acute illness was 3.4 which is in conjunction with findings of a study conducted in a similar setting in India [3]. In our study it was shown that people living in rural Malaysia are aware of the preliminary knowledge about drugs prescribed to them for episodes of common acute illnesses. Most of the rural Malaysians prefer to take allopathic drugs for common illness but nevertheless traditional healers and medications are still in use in Malaysia. Most of the people who were included in the study opted for primary health care sector clinics for treatment instead of a private practitioner. This signifies strong sense of faith in government medical system in rural Malaysia. The Ministry of Health in Malaysia provides affordable health care to its citizens and rural Malaysians were satisfied with the quality of health care provided to them. In a study carried out by Ibrahim et al on drug utilization in rural Malaysia, it was concluded that people are unaware about the proper use of drugs. Rural Malaysians tend to keep drugs longer than necessary and they have the tendency to reuse them [4]. These findings are in contrast to the findings of our study and these differences in study findings can be attributed to the different sociodemographic patterns prevalent in Malaysian society. Completion of prescribed treatment for episode of acute illness is a major problem in rural Malaysia. Strong pharmacovigilance network to track side effects related to the drugs, insisting on completion of treatment via health education can solve the problem over the period of time.

Conclusion

The findings of the study showed that people of village Banggol used drugs appropriately in the community setting and that they are aware of the types of medications prescribed for episodes of common acute illnesses and they also know how to use and store the drugs properly.

Reference

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