

## RATIONAL PRESCRIPTION OF MEDICINES-A STUDY OF INDOOR PATIENTS AT A TERTIARY CARE HOSPITAL.

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**Background:** A study was conducted at Ayub Teaching Hospital, Abbottabad, a tertiary hospital, to know whether drugs are prescribed rationally Keeping in mind indications, interactions, contraindications, proper dosage and economy of the patient. **Methods:** The study was a descriptive case study Records of 200 patients admitted in various units of the hospital were analysed by a panel of pharmacologists and conclusions drawn. **Results:** It was found that only 52% of patients receive prescriptions that were rationale in all aspects. Where as in rest of the patients the rationale could be challenged. **Conclusion:** This study stresses the need for more concentrated and dedicated effort towards prescription of medicines.

### INTRODUCTION

The rational use of medicines is the burning issue in our health care set up. Prescription of medicine is an art based on accurate knowledge and should be exercised skillfully. Unnecessary use and prescription of medicines is the frequent complaint. It is said to be due to irresponsible attitude of prescribing doctors and heavy influence of medical representatives on prescribing doctors. No drug is effective unless it is properly prescribed, dispensed and adequately administered.<sup>2,3</sup>

William Penn has once said "The remedy, proves worse than the disease. Methewprice has said " Cured yesterday of my disease, died last night of my Physician". A well-known saying is that the difference between a Physician and a quack is that a physician knows when not to prescribe a drug a quack doesn't.

A prescribing doctor must be expert enough to prescribe medicines, in right dosage and indications, keeping in mind its side effect, interaction, contraindication and economical value. Thus drug prescription should be suited to each and every individual patient.

This study was conducted at Ayub Teaching Hospital to know whether drugs are prescribed rationally, keeping in view all the above mentioned factors or not.

The study had following objectives:

1. To explore the issue of rational use of medicine in its multidimensional view, i.e. to study whether drugs to the indoor patients are prescribed in Recommended dosage, for

appropriate Duration, observing indications, contraindications, interactions, side effect and socio-economic value.

2. To determine whether in reality the prescription of medicines to the indoor patients is irrational the usual hue and cry are just isolated incidence.

### MATERIALS AND METHODS

The study was a Descriptive Case Study Records of 200 indoor patients at Ayub Teaching Hospital, Abbottabad were examined. The patients were randomly selected from different Medical, Surgical-Pulmonology, Paediatrics, Hepato-Biliary, Orthopedics and Urology units of the hospital.

The selection of patients was randomised, however there was "Tarmac bias" that is the selection of study area was due to easy accessibility.

The Head of Pharmacology department, Ayub Medical College, Abbottabad, approved the research proposal and a formal letter to permit and co-operate during research was sent to the in-charges of all the units included in the study.

The prescriptions collected were then scrutinized extremely carefully and without any bias, using extensive literature review and text book help in order to determine whether drugs were prescribed in right dosage, according to justified indications, keeping in mind its contraindications, side effects and socio-economic value and to determine the rationality or otherwise, in prescription of medicine to the indoor patient.

**RESULTS**

Results of the study are summarized in tables I and 2

**Table 1: Rational versus Irrational Prescription in the 200 cases studied**

No of Rational Prescriptions	%age	No of Irrational Prescriptions	%age
104	52%	96	48%

**Table 2: Common mistakes in Prescription**

Mistake	No of Patients	%age
Indications (Not Indicated but prescribed)	44	22%
Interactions (Unfavorable Interactions)	36	18%
Multiple Mistakes (Wrong Indications, unfavorable Interactions, Contraindication high Cost)	44	22%
Economy	24	12%
Contraindicated but prescribed	3	15%

**Table -3: Average number of Medicines in each Prescription**

Category	Average number of drugs/prescription
Medicine and allied	Five
Surgical and allied	Three

**DISCUSSION**

The study clearly indicates that there is a definite room for the much desired rationale prescription. The prescribing doctors should make more effort while prescribing medicines.

However, this study is a local study and the conditions may vary from institution to institution, similar studies can be conducted in other tertiary level hospitals and can be compared with this and other studies

This study also raises various questions like Why doctors prescribe a drug that is of dubious value? Why are patients frequently prescribed medicines with high incidence of side effects if other available drugs treat same problem with far less risk.' Why prescriptions are written for expensive branded drugs when cheaper generics are available. At least part of the answer lies in Pharmaceutical promotional practices.

However more extensive studies should be taken, which should also include the viewpoint of prescribing doctors to explore the issue in detail

In 1990 there were 207 pharmaceutical manufacturing units in Pakistan out of which 29 were multinational. In 1990. there were 9000 registered drugs in Pakistan, an estimated 10 billion rupees were spent on drugs in 1990 in Pakistan. The drugs market in Pakistan increases by 25% per year<sup>4</sup>

Thus there is very strong marketing force, forcing the doctors to prescribe, what they should not prescribe. However, doctors are liable and responsible for their actions.

It is obvious that when a doctor works independently or in a group, it is just like an architect who designs a house for a private client He is personally responsible for his work, if the house falls down. There is good chance that the architect will be sued for heavy damages. Where doctors are independent or semi-independent, liability is intelligible and understood by most citizens

According to a report, harmful drug mistakes in intensive care units dropped 66% when a pharmacist accompanied doctors on rounds and was present to catch prescribing errors"

It is for the health planners to plan so that the prescribing errors can be minimized. However, doctors should exert more effort and time to prescribe rationally.

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