Original article

AUDIT OF PAEDIATRIC PRESCRIPTIONS FOR THE COMMON PAEDIATRIC PROBLEMS

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ABSTRACT

Objectives: To compare the prevailing prescribing practices of paediatricians with minor and major diploma for common paediatric problems.

Methodology: It was a Cross sectional study in which 10 % of children visiting the outpatient department of paediatrics, Hamdard university hospital with gastroenteritis and Acute respiratory infections, diagnosed according to UNICEF/ WHO protocol were enrolled, their prescriptions checked and results were entered in specially designed Performa.

Results: Five hundred prescriptions were reviewed of which 308 were due to Gastro enteritis, 192 were due to respiratory tract infections1). Average numbers of drugs/ prescription were 3.33 ± 1.2. Paediatricians with minor diploma prescribed 3.5 ± 1.2 drugs/ prescription.
Paediatricians with major diploma prescribed 2.8 ±1.2 drugs/ prescription (p-valve 0.32)
Antibiotic in diarrhoea and respiratory tract infections (upper and lower respiratory tract infections were written in 81.7% cases by paediatricians with lower diploma and 77.7 % cases by paediatricians with major diploma (p- valve 0.27). In respiratory tract infections antihistamines were prescribed in 79.7% of cases by paediatricians with minor diploma and 69.5 % cases by paediatricians with major diploma (p-valve0.11). Anti emetic in Gastroenteritis were written in 69.1% cases by paediatricians with minor diploma and 56.2% cases by Paediatricians with major diploma (p-valve 0.021). More drugs and more antibiotic were given by doctors, with major diploma. Antibiotics were totally different than recommended by the National ARI programme, which the Paediatricians teach in Medical Colleges.

Conclusions: The antibiotics prescribed for common Paediatric Problems were totally different than recommended by the National ARI programme which the Paediatricians teach in Medical College. Active intervention is needed to improve the quality of medical education of physicians who treat children, while in depth measures are required for the training of paediatricians.

KEYWORDS: Paediatrics, Prescriptions, Gastroenteritis, Respiratory infections.

Pak J Med Sci October - December 2007 (Part-II) Vol. 23 No. 6 932-935

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* Received for Publication: October 31, 2006
* Revision Received: July 28, 2007
* 2nd Revision Received: October 2, 2007
* Final version Accepted: October 3,2007

INTRODUCTION

It is claimed that postgraduate diploma helps in improving knowledge of paediatricians,[1-5] but in practice it has been observed that their is no difference in the prescribing habits of Paediatricians.[6-8]

We conducted this study to find out the prescribing habits of paediatricians for common paediatric problems and to compare them with postgraduates with minor and major diploma. The common paediatric problems include diarrhoea and acute respiratory tract infections. There are well defined guide lines

Table-I: Comparison of Prescriptions of Paediatrician with minor diploma / Paediatrician with major diploma

Prescription	*Paediatrician with minor diploma*	*Paediatrician with major diploma*	*p-valve*
Number of drugs/ prescription	3.5 ± 1.2	2.88±1.2	0.002

by the World Health Organization; Integrated Childhood Management Illness manual.[9] According to the WHO guidelines for the management of diarrhoea anti diarrhoeal anti amoebic and antibacterial have little role to play. Oral rehydration salts being the main stay of the treatment, but the prescription of oral rehydration salts has not received the desirable results.[10]

Similarly the WHO manual has classified the upper and lower respiratory tract infections and the lower respiratory tract infections below the age of two months are further classified. as very severe disease. Severe pneumonia and No Pneumonia. Children with no pneumonia do not need antibiotics. After the age of two months children are classified as very severe disease, severe pneumonia, Pneumonia and No pneumonia. And Children with no pneumonia do not need antibiotics. There are specific antibiotics recommended by the WHO/ UNICEF in cases of Very Severe disease, Severe pneumonia and Pneumonia.

METHODOLOGY

Hamdard University Hospital is a undergraduate teaching hospital in Karachi with 305 beds. Department of paediatrics has 25 beds including neonatal nursery and neonatal intensive care unit. Department of paediatrics conduct outpatient on 6 days a week and receives about 8000 cases annually. About twenty patients with gastro enteritis and acute respiratory tract per days are seen in consultant clinic daily. About 5000 children with gastro enteritis and respiratory tract infection were seen in the year 2005 in the out patient department. We selected a 10% sample i.e. Five hundred children for their prescriptions, adapting simple random sampling technique in this cross sectional study.

All patients with gastroenteritis and respiratory tract infections according to the defined criteria of Integrated Childhood Management Illness a UNICEF/ WHO protocol were included. Children with prescription of the above diseases without the name and qualification of physician were excluded.

All the patients visiting paediatric out door department of Hamdard University Hospital for acute gastroenteritis and acute respiratory tract infections enrolled and their prescriptions were taken and photocopied to collect details about the type of antibiotics prescribed, duration of therapy and number of drugs.

RESULTS

Five hundred prescriptions were studied which included three hundred and eight cases of acute respiratory infections and one hundred and ninety two were of Gastroenteritis & diarrhoea cases.

Two hundred and sixty six were male children & two hundred and thirty four female children and their mean age was 22.2 ± 2.1 months. Duration of symptoms before visit to

Table-II: Comparison of Prescriptions of Paediatricians with minor diploma / Paediatricians with major diploma

Disease	*No. of patients*	*Drug prescribed*	*Paediatricians with minor diploma N=213%*	*Paediatricianwith major diploma N= 287*	*p-valve*
All cases	500	Antibiotics	81.7	77.7	0.27
All cases	500	Injections	48.4	38.7	0.03

Table-III: Comparison of Prescriptions of Paediatricians with minor diploma / Paediatricians with major diploma

Disease	*No. of patients*	*Drug prescribed*	*Paediatricians with minor diploma N=213%*	*Paediatricianwith major diploma N= 287*	*p-valve*
A.R.I.	192	Antibiotics	87.8	83.9	0.45
A.R.I.	192	Cough Syrups with antihistamines	79.7	69.5	0.11
Diarrhoea / Vomiting	308	Anti emetic	69.1	56.2	0.021

doctors was 2.4 ±1.5 days, in case of diarrhoea & vomiting and 3.3 ± 1.4 days for acute respiratory tract infection. Paediatricians with minor diploma wrote 3.5±2 drugs and Paediatricians with major diploma wrote 2.85± 1.2 drugs (p–valve 0.002). Average of 3.15 ± 1.2 drugs were prescribed in prescription per patient. Antibiotic in cases of acute respiratory tract infections were written in 81.7% cases by paediatricians with minor diploma and 77.7% cases by paediatricians with major diploma (p–valve 0.27). Injections were used in acute respiratory infections and diarrhoea in 48.4% cases by paediatricians with minor diploma and in 38.7% cases by paediatricians with major diploma (p–valve 0.03).

In cases of acute respiratory tract infections, cough syrup containing antihistamines were written in 79.7% cases by paediatricians with minor diploma and in 69.5% cases by paediatricians with major diploma (p-valve 0.11). In cases of gastroenteritis injectable antiemetics were written in 69.1% cases by paediatricians with minor diploma and 56.2% cases by paediatricians with major diploma (p-valve 0.01).

DISCUSSION

The practice of using drug for every symptom, and antibiotics for viral condition which are self limiting is alarming. Usually patients do not use when many drugs are prescribed due to financial reasons. Combinations of antihistamines and decongestants were widely used in our study which is harmful in children under the age of 6 months.[11] In India it was observed that 18.2% of children were taking drugs that are not required in their age group.[12]

Internationally average number of drugs prescribed per prescription are 2.2 drugs per prescription. In Pakistan 3.4 drugs per person are used in acute respiratory infection in children.[13] Paediatricians with minor diploma have written 3.5±1.2 drugs per prescription whereas paediatricians with major diploma prescribed 2.8 ± 1.2 drugs per prescription. Statically there is no difference in the prescribing habits of paediatricians with major diploma and Paediatricians with minor diploma. Over prescribing of antibiotics is again another problem even when antibiotics are not required. Our cultural pattern and demand for a drug is a problem at the community level and such appropriate measures are needed to improve the quality of medical education of physicians who treat children. Not only that effective steps need to be taken to train Paediatricians.

ACKNOWLEDGEMENT

My sincere thanks to Prof Irfan Siddique Head and Professor of Community Medicine, Hamdard College of Medicine and Dentistry Hamdard University Karachi and to Mr Rehan Khan Computer In-Charge Hamdard University Hospital and to my colleagues in the Department of Paediatrics for their help and assistance.

REFERENCES

1. Iqbal MA. Knowledge and attitude about Breast feeding among doctors trained. Pak Paed J 2000;(24):91-101.
2. Kazi MY, Tabssum MN, Khan HI. Current practices of general practitioners towards management of acute watery diarrhoea in children up to 5 years of age- an experience at filter clinic in Lahore. Pak Paed J 2003;27(2):56-62.
3. Kunde MZ, Ahmed I, Anjum M. Evaluation of diarrhoea management of health professionals trained at the diarrhoea training unit of Rawalpindi General Hospital. J Pak Med Assoc 1997;(1):3-6.
4. Hafez A, Kiani AG, Uddani S. Prescriptions and dispensing prescribing practices in public sector facilities in Pakistan. J Pak Med Assoc 2004;54(4):187-91.
5. Iqbal I, Parveez S, Baig S. Management of children with acute respiratory infections by general practitioners in Multan- an observational study. Pak Med Assoc J 1997;47:24-8.
6. Iqbal MS, Rashid A, Akram M. Knowledge regarding the management of acute respiratory infections in children below 5 years of age by general practitioners- Lahore. Pak Paed J 2002;26(3):107-11.
7. Wing EE, Eniarson TR, Keliner JD. An antibiotic prescribing for Canadian preschool children evidence of over prescribing for viral infections. Clin infect Dis 1999;(29):55-60.
8. Payin M, Nurgozin T, Hafner G. Prescribing practices of rural primary health care physicians in Uzbekistan. Trop Med for Health 2003;(8):182-90.
9. Management of the child with serious infection or severe malnutrition. Guidelines for care at the first referral level in developing countries. Department of Child and Adolescent Health WHO (21) Geneva 27 Switzerland 2000.
10. Nizami SQ, Bhutta ZA. Drug prescribing practices of General practitioners and Paediatricians for childhood diarrhoea in Karachi Pakistan. Soc Sci Med 1996;42(8):1133-9.
11. Haq A. Promethazine Use – A public health problem. Pak Paed J 1995;19(4):159-60.
12. Bhargava R, Uppal S. Use of cold medications for upper respiratory tract infections in children. Pharmacoepidemiol Drug Saf 2001;10:323-7.