

Dear Sir,
Rheumatic fever is a major cause of acquired heart disease in children and young adults throughout the developing world⁽¹⁾. Previous studies have drawn attention to the worrying increase in prevalence of rheumatic heart disease in the African continent^(2,3). With respect to Asia, a recent report suggests that the prevalence in a developing Asian country such as in Malaysia is also high, 20.6% of cardiology cases encountered in the largest hospital in Malaysia were rheumatic heart disease cases⁽⁴⁾. The reasons for this high prevalence in Malaysia are not immediately obvious but may be related to undertreatment of streptococcal sore throats by medical practitioners. On the other hand, it may simply be due to the lack of patient awareness of the need to seek prompt medical attention for severe bacterial pharyngitis. We have therefore conducted a questionnaire survey of both Malaysian medical practitioners and the public to investigate this.

The questionnaire for the survey was distributed to a group of 10-year-old schoolchildren at a primary school (A) n=30; a group of cardiology out-patient attenders (B) n=30, and a group of medical officers in a large university teaching hospital (C) n=30, in Kuala Lumpur, Malaysia. The multiple choice questionnaire for groups A and B consisted of nine stem items addressing frequency of sore throats, ideas about the causes of sore throats and the relationship to heart disease was designed to be completed in a matter of minutes by the respondents who remained anonymous. The questionnaires completed by group C consisted of only three stem items assessing their responses to a case history of bacterial pharyngitis.

Questionnaires were returned by all participants. The majority of participants in group A (74%) and group B (48%) suffered from pharyngitis less than 5 times a year. In response to the question "What did you do each time you had a sore throat?", 5% from group A favoured seeing the GP as did 14% from Group B ($p < 0.05$ by chi-squared comparison). With respect to the causes of sore throat, 74% from group A claimed to know the causes of sore throat but only 4% said it was due to a causative organism; the others attributed it to a variety of causes including weather,

food, etc. Likewise in group B, 48% of the respondents claimed to be aware of causes with 30% demonstrating an understanding of the microbiological basis. The knowledge of the association between sore throats and rheumatic heart disease was minimal; 14% in group A and 30% in group B. Among the sources quoted for this information were medical professionals (doctors and nurses) as well as on their own reading. As to the treatment attitudes of medical practitioners, all 30 answered that they would treat the sore throats with an appropriate antibiotic and an accompanying anti-pyretic.

The results of this small questionnaire survey suggest that the increased prevalence of rheumatic carditis in our sample population is not related to undertreatment by medical professionals but may be due to a lack of basic understanding amongst the public as to the cause of sore throats and its relationship to heart diseases. Although this is data derived from a random survey and may not represent the country as a whole, nevertheless our data supports the introduction of an education programme directed at the public (in Malaysia) regarding the need to seek medical intervention when suffering from pharyngitis, so as to prevent its sequelae. Furthermore, it also identifies possible routes for the dissemination of this information such as via medical professionals in public forums and pamphlets for out-patient groups.

It is possible that there is a variation in the prevalence of rheumatic fever/rheumatic heart disease between rural and urban communities and between different socioeconomic groups. This study does not propose otherwise, but suggests that further investigation is indicated on the prevalence in rural areas and smaller towns in Malaysia, to identify target groups; and if necessary, to implement education and control programmes. Such public or community health measures would help reduce the cost of hospitalisation and cardiac surgery as currently, rheumatic heart disease accounts for the largest group of valve surgery operations at the General Hospital, Kuala Lumpur⁽⁵⁾.

ACKNOWLEDGEMENTS

We are grateful to Pharmacia and Upjohn Ltd. as well as the Enid Linder Foundation

for their financial assistance without which this elective project would not be possible. We would also like to thank Professor C C Lang, Department of Medicine, University Hospital, Kuala Lumpur, Malaysia.

S Chadha
Medical Student
Charing Cross and
Westminster Medical School, London

Dr Bernard Inecheh
Lecturer
Department of Public Health
Charing Cross and
Westminster Medical School, London.

REFERENCES

1. Taranita A, Markowitz M. Rheumatic fever: A guide to its recognition, prevention and cure. London: MTP Press Ltd, 1981.
2. Ekra A, Bertrand E. Rheumatic heart disease in Africa. World Health Forum 1992; 13:311-33.
3. Nordet P. Rheumatic heart disease in Africa. World Health Forum 1993; 14:292-3.
4. Jamal F, Abdullah N et al. Rheumatic heart disease in referred cases: Experience at a cardiology centre. The Family Practitioner 1988; 11(1/2):46-7.
5. Awang Y, Haron AM et al. Cardiac surgery in General Hospital Kuala Lumpur: a review of all open heart operations April 1982 - February 1987. Med J Malaysia 1987; 42(2):81-5.

Dear Sir,

I read with interest the report by Oh et al in the June 1996 issue of the SMJ comparing amoxicillin-clavulanic acid with cefuroxime in the treatment of adult patients admitted to the hospital with CAP⁽¹⁾. The appropriate empiric choice of antibiotics for CAP is a highly controversial issue and of considerable clinical and commercial importance.

There is ongoing debate in the current medical literature following the publication of guidelines for the initial management of CAP by the American Thoracic Society in 1992⁽²⁻⁵⁾. The consensus seems to favour an outcome oriented approach based upon knowledge of region-specific prevalence of pathogens^(3,5).

The selection of one of two beta-lactam antibiotics as first choice agent by Oh et al appear to be inappropriate from both the traditional point of view which targets the most commonly identified pathogen or the approach recommended by the American Thoracic Society which categorises patients into age and risk groups. The most common pathogens identified by Oh et al were the atypical organisms. Beta-lactam agents are not effective for atypical organisms. Most of the patients in the study appear to be below 60 years old and do not suffer from co-morbid conditions. The most likely causal agents in this category of patients are streptococous and atypical organisms which was indeed the group of pathogens most frequently identified by Oh et al. The first choice drug for this group of patients with CAP would be a macrolide and not a beta-lactam agent. Thus, from analysis of their own data and following current practice guidelines, the first choice antibiotic for most of the patients in the Oh et al study would be a macrolide. The beta-lactam agents suggested by Oh et al would be more appropriate for the 30% - 40% of their patients with co-morbidity.

It should be further noted that though beta-lactam agents are indeed recommended by the American Thoracic Society for hospitalised patients, specific risk factors (above 65 years, co-morbidity and clinical severity) are required for hospitalisation according to their guidelines. It is very likely that the threshold for hospital admission in patients with CAP is much lower in Singapore than in America. Most emergency room doctors in

Singapore would admit even a young previously healthy and currently mildly ill patient with acute fever and cough, once a pneumonic infiltrate is detected on the chest X-ray. None of the patients in the study was bacteraemic. An indirect indication of the overall severity of their patients might be gleaned from the mortality rate which was not reported in the paper.

Dr T K Lim
Department of Medicine
National University Hospital

REFERENCES

1. Oh HML, Ng AWK, Lee SK. Cefuroxime compared to amoxicillin-clavulanic acid in the treatment of community-acquired pneumonia. *Singapore Med J* 1996; 37:255-7.
2. Niederman MS, Bass JB, Campbell GD, et al. Guidelines for the initial management of adults with community-acquired pneumonia: diagnosis, assessment of severity and initial antimicrobial therapy. *Am Rev Respir Dis* 1992; 148:1418-26.
3. Fein AM, Niederman MS. Guidelines for the initial management of community-acquired pneumonia: Savory recipe or cookbook for disaster? *Am J Respir Crit Care Med* 1995; 152:1149-53.
4. Bartlett JG, Mundy LM. Community acquired pneumonia. *N Engl J Med* 1995; 333:1618-24.
5. Correspondence. *N Engl J Med* 1996; 334:861-3.

Authors' Reply

Dear Sir,

We refer to Dr TK Lim's letter regarding the empiric choice of antibiotics for community-acquired pneumonia in our study⁽¹⁾.

The main objective of the study was to compare the efficacy and safety of cefuroxime and amoxicillin-clavulanic acid in the treatment of community-acquired pneumonia (CAP) in hospitalised patients. The selection of either a second-generation cephalosporin or a beta-lactam/beta-lactamase inhibitor combination was recommended for hospitalised patients with community-acquired pneumonia (CAP) by the American Thoracic Society guidelines⁽²⁾.

We have noted from published studies that there has been increasing use of potent broad spectrum antibiotics in particular the third generation cephalosporins for the empiric therapy of CAP⁽³⁾. Hence the

selection of amoxicillin-clavulanic acid and cefuroxime in our study should be more cost-effective by their broad in vitro antibacterial activity and oral and intravenous formulation.

Of the 3 patients who failed cefuroxime therapy, two were of unknown etiology and the third had non-fermentative gram-negative bacilli isolated on sputum culture. The etiology of the CAP of the 4 patients who failed amoxicillin-clavulanic acid therapy included pseudomonas (2), legionella and tuberculosis (1) and unknown (1).

It is interesting to note that 3 patients with atypical pneumonia (2 mycoplasma and 1 legionella) responded to therapy with beta-lactam antibiotics. This may be explained by the possibility of false positive reaction to other bacteria or that pneumonia due to mycoplasma can be self-limiting^(4,5). There was no death recorded in our study.

In conclusion, amoxicillin-clavulanic acid and cefuroxime have comparable efficacy and safety in the treatment of community-acquired pneumonia in hospitalised patients. The empiric choice of antibiotics for CAP is at the discretion of the attending physician.

Dr H M L Oh
Department of Medicine
New Changi Hospital

Dr A W K Ng
Department of Respiratory Medicine
Tan Tock Seng Hospital

Dr S K Lee
Department of General Medicine
Tan Tock Seng Hospital

REFERENCES

1. Oh HML, Ng AWK, Lee SK. Cefuroxime compared to amoxicillin-clavulanic acid in the treatment of community-acquired pneumonia. *Singapore Med J* 1996; 37:255-7.
2. Niederman MS, Bass JB, Campbell GD, et al. Guidelines for the management of adults with community-acquired pneumonia: diagnosis, assessment of severity and initial antimicrobial therapy. *Am Rev Respir Dis* 1992; 148:1418-26.
3. Grasele TH, Timm E, Welage L. A nationwide survey of antibiotic utilisation in bacterial pneumonia (abstract). Twenty-eighth Intersc Antimicrob Ag Chemother, Los Angeles, 1988.
4. Braum SG. Mycoplasma pneumonia and atypical pneumonia. In: Mandell, Douglas and Bennett, eds. Principles and Practice of Infectious Diseases. Churchill Livingstone 1995: 1704-13.
5. Yu VL. Legionella pneumophila (Legionnaire's Disease). In: Mandell, Douglas and Bennett, eds. Principles and Practice of Infectious Diseases Churchill Livingstone 1995: 2087-97.