TP Lam 林大邦
KF Lam 林國輝

Family doctors' attitudes towards patient self-management of upper respiratory tract infections

家庭醫生對於上呼吸道感染患者自行處理病情的態度

Objectives. To determine the clinical attitudes and behaviour of family doctors in Hong Kong towards patient self-management of upper respiratory tract infections, and factors which may influence this practice.
Design. Questionnaire survey conducted between February 1999 and April 1999.
Setting. Hong Kong College of Family Physicians.
Participants. Members of the Hong Kong College of Family Physicians.
Results. A total of 730 family doctors completed a postal questionnaire on self-management of upper respiratory tract infection, giving an overall response rate of 71.9%. The majority (95.2%) of respondents agreed that patients should be advised on self-management. More than two thirds (69.7%) of respondents also considered patients should be advised on self-medications for upper respiratory tract infection. Nearly two thirds and one third of respondents stated they would advise more than 60% of patients on self-management and self-medication, respectively. A close association was noted between the doctor's view on the usefulness of antibiotics for upper respiratory tract infection and patient advice regarding self-management and self-medication strategies.
Conclusion. Doctors with certain characteristics are more likely to advise patients with upper respiratory tract infection on self-management and self-medication for upper respiratory tract infection.

目的：確定家庭醫生對上呼吸道感染患者自行處理病情的臨床態度和行為，及可能影響這習慣的因素。
設計：在 1999 年 2 月到 1999 年 4 月期間進行的跨科問卷調查。
安排：香港家庭醫學學院。
參與者：香港家庭醫學學院成員。
結果：總數730名的家庭醫生填寫了有關上呼吸道感染自行處理的郵寄問卷調查，總反應率為 71.9% 。回答者多數 (95.2%)同意患者應考慮自行處理病情。三分之二以上(69.7%)的回答者還考慮建議患者自行作上呼吸道感染的藥物治療。分別約有 2/3 和 1/3 回答者聲稱他們會建議 60% 以上患者自行處理和自行作藥物治療。發現醫生對於抗生素對上呼吸道感染是否有效的觀點與建議患者自行處理和自行作藥物治療之間有密切關聯。
結論：具有某些特性的醫生比較有可能建議患者自行處理和自行作藥物治療上呼吸道感染。

Key words:
Family medicine;
General practice;
Management pattern;
Respiratory tract infection

關鍵詞：
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The University of Hong Kong: Family Medicine Unit, Department of Medicine
TP Lam, MFM (Monash), FRACGP
Department of Statistics and Actuarial Science
KF Lam, PhD

Correspondence to: Dr TP Lam

Introduction

Upper respiratory tract infections (URTIs) are by far the most common diagnosis made in general family practice in Hong Kong, accounting for

34.6% of all diagnoses, according to a morbidity survey conducted by the Hong Kong College of Family Physicians.[1] Upper respiratory tract infection is also a common diagnosis worldwide and is responsible for a significant proportion of primary care consultations.[2,3] Many patients may attend their family doctor because they believe antibiotics are useful for URTIs. There is however, an increasing realisation that for most acute respiratory illnesses—common cold, sore throat, otitis media, sinusitis, and bronchitis—treatment with antibiotics is likely to be of only marginal benefit to individual patients.[4-6] Despite this, 12 million antibiotic prescriptions were written for colds, URTIs, and bronchitis during 1992 in the US alone. This equates to approximately 21% of all antibiotic prescriptions for adults in the US in that year.[7]

Antibiotic prescribing for URTIs has been shown to have multiple consequences, including higher consultation rates,[8] increased re-attendance rates,[9] and the emergence of drug-resistant bacteria.[10-12] Effective negotiation, communication and information sharing appears to be crucial when dealing with parents and their young children with acute respiratory illness.[13] Observational studies investigating the quality of consultations in family practice, have shown that when psychosocial problems are addressed, prescribing of antibiotics falls.[14] The objectives of this study were, therefore, to determine the clinical attitudes and behaviour of family doctors in Hong Kong towards self management of URTIs, as well as the factors influencing these attitudes and behaviours.

Methods

This study forms part of a larger research project, investigating the management of URTIs by family doctors in Hong Kong.[15] All 1016 fellows, members and associate members of the Hong Kong College of Family Physicians normally residing in Hong Kong were sent an explanatory letter and a questionnaire for completion between February 1999 and April 1999. Information including age, sex, years of clinical practice, postgraduate qualifications, formal vocational training in family medicine, type of clinical practice (private versus public), and any special clinical interests, together with clinical attitudes and behaviour with regard to patient self-management of URTI, was requested. Each questionnaire comprised two sheets.

Data were analysed using Statistical Package for Social Sciences (Windows version 8.0; SPSS Inc., Chicago, US) for preliminary summary statistics. As the majority of variables were ordinal values, an ordinal logistic regression analysis was carried out for each variable of interest. The statistical significance of potential explanatory variables—continuous variables (such as age and years of practice), discrete variables (such as sex, and type of practice) and ordinal variables (responses to some questions) —were tested by the likelihood ratio test using JMP (Windows version 3.2; SAS Institute Inc., Cary, North Carolina, US).

Results

By early July 1999, 733 questionnaires had been returned after three mailings. Three questionnaires were returned because of incorrect addresses. Thirty-one respondents were asked to complete questionnaires because they had overlooked the second page. The overall response rate was 71.9% (730/1016). The response rate was higher among fellows (83.6%) than in members (75%) or associate members (63.5%).

Respondents included 560 males, 167 females, and a further three respondents who declined to disclose their sex. Age of respondents ranged from 24 to 78 years (median, 40 years). They had been in clinical practice from less than 1 year to 48 years (median, 15 years). As expected, the older the respondent, the longer the years of clinical practice (correlation coefficient, $r=0.974$, $P<0.001$). There were more family doctors working in the private than the public sector (62.9% versus 37.1%). Ninety percent of respondents had special clinical interests, including internal medicine (30.0%), paediatrics (16.6%), obstetrics and gynaecology (7.8%), dermatology (5.6%), and surgery (4.0%).

The majority of respondents (695/730; 95.2%) indicated that patients should be advised on simple self-management for URTI, for example, bed rest and oral fluids, whereas 4.5% (33/730) did not agree with this approach. These responses were related to practitioner age ($P<0.0001$), and years of clinical practice ($P<0.0001$). Older, and more senior family doctors were more likely not to advise patients on self-management practices ($P<0.0001$ for both variables).

Most respondents (509/730; 69.7%) also thought patients should be advised on the use of simple self-medications for URTI, such as paracetamol and antihistamines, whereas 29.6% (216/730) did not agree with such advice. Responses were related to age ($P<0.05$), years of clinical practice ($P<0.05$), type of practice ($P<0.05$), special clinical interest ($P<0.01$) and postgraduate vocational training in family medicine ($P<0.05$). Older doctors ($P<0.0001$), more senior

doctors (P<0.0001), those in private practice (P<0.0001), and practitioners with special clinical interests in surgery and surgical specialties (P<0.001) were less likely to advise patients on self-management including simple self-medications. Family doctors with formal postgraduate vocational training in family medicine, however, were more likely to support self-management by patients (P<0.01). Furthermore, if a doctor was more likely to advise patients of simple self-management, he/she was also more likely to advise patients on the use of simple self-medications (P<0.001).

Family doctors were also asked how frequently they would advise patients on simple self-management for URTIs. Two thirds of doctors responded that they would advise self-management for over 60% of patients with URTI (Table 1). This practice was related to their age and years of clinical practice, with older, and more senior doctors less frequently advising patients of self-management (P<0.001 for both variables). Doctors who thought patients should be advised of self-management (P<0.0001), including self-medications (P<0.0001) however, more frequently advised patients of these practices. A close relationship was noted with respect to whether the doctor advised his/her patients on self-management for URTI, and tendency to prescribe antibiotics for this condition. The more likely it was that the doctor prescribed antibiotics for URTI, the less likely it was that he/she would advise his/her patients on self-management (P<0.05). If the doctor thought antibiotics were useful for URTI (P<0.05), he/she more often prescribed antibiotics (P<0.01); and the more patients the family doctor believed were expecting antibiotics (P<0.05), the less frequently he/she would advise on self-medications.

Approximately one third of doctors indicated that they would advise more than 60% of patients with URTI on the use of self-medications (Table 2). Doctors in private practice were more likely to advise the use of self-medications than their public practice counterparts.

Table 1. Responses to the question 'How often do you advise patients on simple self-management (eg bed rest, oral fluids) for their upper respiratory tract infection?'

Frequency (%)	Respondents, n=730 No. (%)
0–19	79 (10.8)
20-39	70 (9.6)
40-59	91 (12.5)
60-79	113 (15.5)
80-100	375 (51.4)
Missing data	2 (0.3)

Table 2. Responses to the question 'How often do you advise patients on simple self-medications (eg paracetamol and antihistamines) for their upper respiratory tract infection?'

Frequency (%)	Respondents, n=730 No. (%)
0-19	251 (34.4)
20-39	113 (15.5)
40-59	130 (17.8)
60-79	105 (14.4)
80-100	125 (17.1)
Missing data	6 (0.8)

Discussion

This questionnaire survey reveals the approach to management of patients with URTI taken by family doctors in Hong Kong. Upper respiratory tract infection accounts for a significant proportion of primary care consultations, consuming important health care resources. It is therefore reassuring to note in this regard that the vast majority of respondents believed patients should be advised of simple self-management strategies for their URTI. The data gathered, however, also indicates that only approximately two thirds of respondents were regularly advising self-management for more than 60% of patients seen with URTI. This raises the issue of how the remaining patients with URTI are managed by their family doctors. Are these patients given medications that they do not need? Do family doctors teach individual patients what they need to know about their illnesses?

In addition, it is interesting to note that approximately one third of respondents said that they would advise more than 60% of patients with URTI regarding the use of self-medications. Doctors in private practice appeared more in favour of this approach than doctors in public practice. This refutes the commonly held view that private doctors might be less motivated to educate patients on health care for fear of losing patients.

The negative relationship between the doctor's view on the usefulness of antibiotics and their advice on self-management and self-medication highlights the importance of educating primary care doctors on this important issue. It also confirms the close relationship between inappropriate management and increased health care utilisations.

Patients now expect their doctor to provide them with necessary information on their illness.[16] Surveys, such as this study, provide information on how closely this expectation is currently matched with clinical reality.

Conclusion

This study has identified major factors affecting family doctor's advice to patients on self-management and self-medication for URTIs. These findings are important to understand the clinical behaviour of doctors in managing the most common condition in family practice.

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