Open randomised trial of prescribing strategies in managing sore throat

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Abstract

Objective: To assess three prescribing strategies for sore throat.

Design: Randomised follow up study.

Setting: 11 general practices in the South and West region.

Subjects: 716 patients aged 4 years and over with sore throat and an abnormal physical sign in the throat; 84% had tonsillitis or pharyngitis. Patients were randomised to three groups: prescription for antibiotics for 10 days (group 1, 246 patients); no prescription (group 2, 230 patients); or prescription for antibiotics if symptoms were not starting to settle after three days (group 3; 238 patients).

Main outcome measures: Duration of symptoms; satisfaction and compliance with and perceived efficacy of antibiotics; time off school or work. Outcomes were documented in 582 subjects (81%).

Results: Median duration of antibiotic use differed significantly in the three groups (10 *v* 0 *v* 0 days, $P < 0.001$); 69% of patients in group 3 did not use their prescription. The proportion of patients better by day 3 did not differ significantly (37% *v* 35% *v* 30%, P=0.28), nor did the duration of illness (median 4 *v* 5 *v* 5 days, P=0.39), days off work or school (median 2 *v* 2 *v* 1, P=0.13), or proportion of patients satisfied (96% *v* 90% *v* 93%, P=0.09), although group 1 had fewer days of fever (median 1 *v* 2 *v* 2 days, P=0.04). More patients in group 1 thought the antibiotics were effective (87% *v* 55% *v* 60%, $P < 0.001$) and intended coming to the doctor in future attacks (79% *v* 54% *v* 57%, $P < 0.001$). "Legitimation" of illness—to explain to work or school (60%) or family or friends (37%)—was an important reason for consultation. Patients who were more satisfied got better more quickly, and satisfaction related strongly to how well the doctor dealt with patient's concerns.

Conclusion: Prescribing antibiotics for sore throat only marginally affects the resolution of symptoms but enhances belief in antibiotics and intention to consult in future when compared with the acceptable strategies of no prescription or delayed prescription. Psychosocial factors are important in the decision to see a general practitioner and in predicting the duration of illness.

Introduction

Patients with sore throat are commonly seen in primary care.[1] Though recent guidelines advocate using results from throat swabs—or clusters of symptoms or signs—to determine which patients should be given antibiotics,[2] management is still controversial.[3 4] Throat swabs have poor validation characteristics,[5] are expensive, and may not alter prescribing decisions.[6] Further evidence and a recent systematic review showed that antibiotics give only marginal benefit in resolving symptoms or preventing complications—both suppurative and non-suppurative (rheumatic fever, glomerulonephritis)[7-9]. The largest primary care trial found that antibiotics did not shorten the duration of symptoms.[10]

Though double blind trials give the best evidence for efficacy by controlling the placebo effect, the behaviour and perceptions of patients and doctors may not be generalisable to the normal setting. By more closely approximating everyday practice, open trials provide important evidence of effectiveness; they are essential when outcome measures include patients' perceptions and choices in response to different strategies—for example, whether "delayed" prescriptions are collected, the perceived efficacy of antibiotics, or the likelihood of future attendance when symptoms have resolved without treatment.

An open randomised controlled trial of different management strategies in upper respiratory conditions has not yet been carried out. Case descriptions for otitis media and a non-randomised open trial of strategies for managing sore throat have been published.[11-13] We report an open trial comparing three common plausible strategies (antibiotic prescription, no prescription, or delayed prescription) in patients with sore throat.

Methods

Development of advice packages—The advice package given to patients in each group had six or seven standard statements supporting the particular strategy and included advice to take analgesics or antipyretics. Provisional versions of the packages were modified after tape recorded interviews (five with general practitioners and 15 with patients presenting with sore throat) which identified important content and appropriate wording for the packages and outcome measures.

Setting—General practitioners expressing an interest in ear, nose, and throat research on the Wessex research network register were contacted: 25 general practitioners (17 men) in 11 general practices agreed to participate. Six practices were training practices, eight were wholly or predominantly rural (OPCS classification), and three were fundholding.

Patients—During the study period (September 1994 to May 1996), 714 patients aged 4 years and over presented to their general practitioners with sore throat either as principal or subsidiary symptom and showed an abnormal physical sign localising to the throat (inflamed tonsils or pharynx, purulent exudate, faucial or palatal inflammation, cervical adenopathy). For children (under 12 years), who are less likely to complain of sore throat, abnormal signs in the throat were sufficient.

Exclusions—Patients were excluded if they had other explanations of sore throat (drugs, aphthous ulcers, candida, etc), were very ill (when not giving antibiotics might be unethical), had suspected or previous rheumatic fever, had had multiple attacks of tonsillitis (>5/year), had had severe local complication (quinsy), or were pregnant.

Calculation of sample size—We calculated sample size for 80% power and significance at the 5% level of significance. Data from previous studies showed that 50 patients per group were required to detect one day's difference in resolution of symptoms with antibiotics (4 days with antibiotics, 5 days with no antibiotics or delayed antibiotics; standard deviation 2 days[10]).[14] However, with the standard deviation from the current study (3.15 days), detecting one day's difference would require 150 patients in each group, and detecting 1.5 days' difference would require 50 patients in each group. Detecting a 15% difference in the proportion of patients better after three days[9 10] would require 173 patients in each group (using the sample size calculator from SPIDA version 1.6—a total of 693 to allow for 25% drop out.

Randomisation—Patients gave written consent to a "study looking at how quickly sore throats settle." To minimise contamination between the groups, general practitioners were asked not to discuss the efficacy of antibiotics before randomisation. During the consultation the general practitioner opened a sealed envelope containing one of the three randomised advice sheets based around one of three prescribing strategies. Patients assigned to group 1 were given a prescription for antibiotics (10 day prescription of penicillin V (or erythromycin if sensitive to penicillin), 250 mg four times daily (125 mg for 3-5 year olds). Patients assigned to group 2 were not offered antibiotics. Patients assigned to group 3 were offered antibiotics as in group 1, but the patient could collect the prescription from the surgery if symptoms were not starting to settle within three days.

Documentation—Each advice sheet had boxes to tick once the statement had been read or explained. The advice sheet was returned to the administrative centre for monitoring.

The general practitioner's documentation sheet showed days of illness, physical signs, and antibiotic prescription. At the end of the study general practitioners were sent a questionnaire asking them to rank the list of reasons for non-recruitment and how they had used the advice packages (read verbatim, used as a prompt, etc).

Patients were given a daily diary in which to record symptoms and temperature (using the Tempadot thermometer[15]). This form of data collection minimises the bias that could result from a researcher administered questionnaire. The diary was to be filled in each day until patients were both free of symptoms and had finished their medication. Patients answered written questions on four point Likert scales (very, moderately, slightly, not at all) at the beginning of treatment—about worries, satisfaction, and "legitimation" (attending the doctor to explain the illness to others)—and at the end—about antibiotic use, perceived efficacy, future intentions, and time off work and school. Within three days of the consultation, patients were contacted by a research assistant to check that there were no problems with filling in the diary. A total of 105 patients had not returned their diaries two weeks after entry into the study; these patients were telephoned and asked the questions addressed by the diary.

Validity of telephone information and reliability of questions used—One week after the diaries were received, 25 consecutive patients were telephoned and asked about the duration of sore throat; these data showed excellent agreement with the diary (Spearman $r=0.94$; $P<0.001$), median difference 0 days (interquartile range for the difference 0 to 1 day, range −2 to 2 days). The Likert scale questions were sent again to 25 respondents after two weeks: there was high agreement on the two occasions ($>14/20$), with good rank correlations (>0.64) and κ values (>0.65).

Data entry and analysis—Data were entered and analysed on an intention to treat basis with SPSS. Differences in proportions were assessed by the χ^2 test. For continuous variables, data were presented as medians (interquartile range), and groups were compared by the Kruskal-Wallis test to avoid assumptions about the normality of data—which was skewed for some variables. Subgroup analysis was performed by selecting features that might predict presence of streptococcus (that is, predict antibiotic response). To limit type I error, we prioritised features to test: the first priority was for variables found important in a previous study[10] —pharyngitis and enlarged cervical glands; second priority was for variables identified from other settings,[2 16-18] including a cluster of symptoms or signs (three of the following: tender cervical glands, higher temperature, purulent exudate, no cough, dysphagia) and a Breese score of more than 25 (Breese scores are calculated from nine factors, each weighted according to likelihood of predicting that results from a throat swab would be positive; scores less than 25 are associated with a low incidence of positive swabs[18]). Multivariate analysis of the predictors of a prolonged course of antibiotic treatment will be presented in a subsequent paper.

Table 1 Characteristics of all patients with sore throat randomised to one of three treatment groups and of those completing a daily diary or providing information by telephone (responders). Values are numbers (percentages) unless otherwise indicated

Characteristics	Group 1 (antibiotics)	Group 2 (no antibiotics)	Group 3 (antibiotic offer delayed)	Total	χ^2 test	P value
Age >12 years:						
All patients	187/246 (76)	173/231 (75)	181/235 (77)	541/712 (76)	0.3	0.9
Responders	161/215 (75)	136/186 (73)	134/179 (75)	431/580 (74)	0.2	0.9
Male sex:						
All patients	95/246 (39)	82/232 (35)	82/237 (35)	259/715 (35)	1.0	0.6
Responders	83/215 (39)	65/187 (35)	67/180 (37)	215/582 (37)	0.6	0.7
Duration >3 days before seeing doctor:						
All patients	82/242 (34)	86/229 (38)	97/235 (41)	265/706 (38)	2.8	0.2
Responders	72/211 (34)	74/186 (40)	73/178 (41)	219/575 (38)	2.3	0.3
Tonsillitis or pharyngitis:						
All patients	206/246 (84)	198/231 (86)	200/237 (84)	604/714 (85)	0.4	0.9
Responders	180/215 (84)	159/187 (85)	150/180 (83)	489/582 (84)	0.2	0.9
Cervical glands enlarged:						
Randomised group	127/246 (52)	111/231 (49)	126/237 (53)	365/714 (51)	1.1	0.6
Responders	115/215 (53)	94/187 (50)	100/180 (56)	309/582 (53)	1.1	0.6
Initial temperature >37.5°C*	40/161 (25)	26/136 (19)	32/132 (24)	98/429 (23)	1.6	0.5
Cough*	141/214 (66)	123/186 (66)	115/179 (64)	379/579 (65)	0.2	0.9
Further education*	85/211 (40)	60/182 (33)	75/176 (43)	220/569 (39)	3.9	0.1

*Responders only; no information for randomised group.

Results

Diary or phone responses were obtained in 582 (81%) subjects—a higher response rate than in the previous major study in primary care (70%).[10] Socio-demographic and clinical features were similar in the three groups, both in the total group and in the responders (table 1).

Selection bias—To assess selection bias due to non-recruitment, we compared the responders from high recruiting general practitioners (those recruiting more than 80 patients—probably most patients presenting to them[19 20]) with those from lower recruiters. There was no difference in the percentage aged over 12 (76% in high recruiters *v* 76% in low recruiters, χ^2=0.03, P=0.87), those who had had symptoms for more than three days before consultation (39% *v* 36%, χ^2=1.14, P=0.29), sex (males 39% *v* 33%, χ^2=3.2, P=0.14), or the number with three of the five symptoms and signs (24% *v* 22%, χ^2=0.12, P=0.7). The generalisability of the results was supported by the general practitioners' questionnaire: the highest ranked reason for not recruiting was "no time" (ranked first by 60%); patient's refusal was the most uncommon reason (ranked first by 13%).

Group differentiation—General practitioners' initial compliance with each prescribing strategy was good. In group 1, 243 of 246 patients (99%) left the consultation with a prescription for antibiotics compared with 5/230 (2%) in group 2 and 11/237 (5%) in group 3; antibiotic use was reported in 210/211 (99%), 23/184 (13%), and 55/176 (31%) respectively. Duration of antibiotic use for the three groups was significantly different (median duration 10 *v* 0 *v* 0 days, Kruskal-Wallis χ^2=329, P < 0.001; mean 9 *v* 0.9 *v* 2.9 days).

Resolution of symptoms—The three groups did not differ in resolution of symptoms by three days (37% *v* 35% *v* 30%, χ^2=2.50, P=0.28) or in the median duration of any symptom except fever (table 2). Figure 1 shows marginal differences between groups in duration of symptoms.

Subgroup analysis—Advice groups did not differ significantly in the most important variables selected in advance (enlarged cervical glands or pharyngitis) (table 3). The only significant differences were found for high temperature (>37.5 °C) and having three of the five symptoms and signs. For both these variables, however, the mean ranks for initial antibiotics and no antibiotics were similar (44 *v* 42 *v* 62 for higher temperature; 42 *v* 42 *v* 57 for symptoms and signs). Since the group given antibiotics immediately was so similar to the group given no prescription, antibiotics per se are not likely to be important.

Differences in patients' beliefs and intentions—Patients given antibiotics immediately were more likely to believe that antibiotics were effective. They were also more likely to intend consulting in future episodes (table 4).

Satisfaction—Most patients indicated they were very satisfied or moderately satisfied and had their worries dealt with very well or moderately well (table 4). In group 1 more patients indicated that they were very satisfied, rather than the other categories, with both the

Table 2 Duration and prevalence of symptoms in patients presenting with sore throat

	Group 1 (antibiotics)	Group 2 (no antibiotics)	Group 3 (antibiotic offer delayed)	χ^2 test	P value
Median (interquartile range) duration of symptom (days):					
Sore throat	4 (3-6)	5 (3-7)	5 (3-7)	1.9	0.39
Cough	3 (0-7)	3 (0-7)	3 (0-7)	0.1	0.97
Headache	2 (1-4)	2 (0-4)	2 (1-4)	0.6	0.74
Unwell	4 (2-5)	3 (2-5)	3 (2-5)	1.7	0.43
Fever (>37.0°C)	1 (0-3)	2 (0-4)	2 (0-4)	6.6	0.04
Analgesic use	3 (2-5)	4 (2-5)	4 (2-5)	1.6	0.46
Time off work or school	2 (0-4)	2 (0-6)	1 (0-4)	4.0	0.13
No (%) with symptom:					
Crying (children only; n=149)	15 (28)	18 (36)	14 (31)	0.8	0.66
Diarrhoea	23 (11)	16 (9)	23 (13)	1.7	0.43
Stomach ache	66 (31)	52 (28)	48 (27)	0.9	0.62
Vomiting	18 (8)	22 (12)	15 (8)	1.7	0.42
Rash	14 (7)	21 (12)	11 (6)	4.0	0.61

*Kruskal-Wallis χ^2 for duration of symptoms; Pearson χ^2 for No (%) with symptoms.

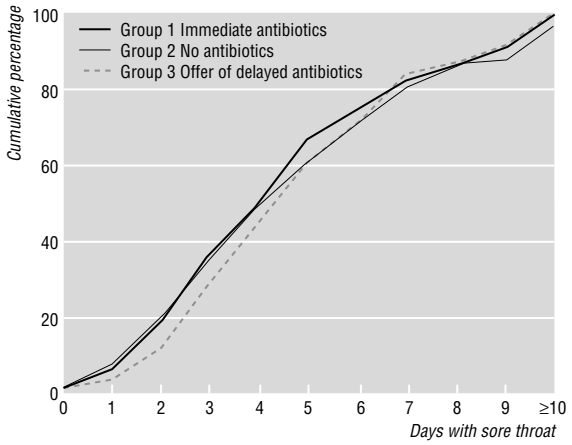

Fig 1 Duration of sore throat after consultation in patients with sore throat randomised to one of three treatment groups

consultation (84% *v* 58% *v* 65%, χ^2=33, P<0.001) and how their worries were dealt with (81% *v* 61% *v* 63%, χ^2=22, P<0.001). Satisfied patients got better more quickly (median duration 4.0 days for very satisfied, 5.0 days for moderately, 5.5 days for not very, 6.5 days for not at all; Kruskal-Wallis χ^2=15.4, P=0.002). Satisfaction and dealing with concerns were closely associated (agreement 497/572 (87%); χ^2 for trend=385, P<0.001; κ=0.72).

Discussion

Trial design

This is the first open randomised controlled trial of prescribing strategies for sore throat, and the largest dataset (n=582) from a randomised controlled trial for sore throat from primary care. Despite several limitations the study provides reasonable estimates of the effectiveness of prescribing strategies for sore throat.

One potential limitation is that the trial excluded very ill patients and thus cannot show the efficacy of antibiotic prescribing strategies for them. Nevertheless, the trial considers the large group for which general practitioners might prescribe (or withhold) antibiotics.[21]

General practitioners switching between prescribing strategies according to randomisation of patients may be uncomfortable, and if the assigned strategies were not adhered to, the groups would be differentiated inadequately (contamination bias). However, randomisation by practice leads to potential selection bias, as the strategy (and thus the group) would be known in advance. Furthermore, contamination bias was minimised by structuring advice packages. In fact groups were well differentiated, as shown by patients' perceptions and antibiotic use.

Selective overall recruitment may limit generalisability of results. A comparison of patients from high and low recruiters, however, showed no obvious bias, consistent with general practitioners reporting lack of time as the commonest reason for non-recruitment. In addition, selective recruitment between groups may threaten randomisation—but in fact the groups had similar characteristics. Variable or low response rates can jeopardise generalisability and threaten randomisation; however, a response rate of more than 80% was achieved, and the responders had similar characteristics to the original randomised group, which did not differ significantly between groups.

Though the open design may cause bias owing to the placebo effect, it was chosen because it mimicked perceptions and behaviour of everyday practice more closely and could assess outcomes where patients' knowledge of treatment is essential (perception of efficacy, collecting scripts, satisfaction, intention to consult). By supporting each proposed strategy, the doctor functioned as a placebo in each group.

Role of antibiotics

The small differences between the three groups in the proportion of patients better by day 3 and in all symptoms (except fever) are consistent with findings of the previous major primary care trial[10], and suggest that antibiotics only marginally affect resolution of symptoms.

Our findings suggest that identifying broad subgroups is unlikely to predict antibiotic response. Perhaps only more extreme groups—people with Breese scores of 30, or with all features of a complex of symptoms and signs—should be included in trials.[2 16-18] However, in such subgroups it is probably only patients with positive throat swabs who benefit from antibiotics.[22] Extreme subgroups are made up of a small minority of patients presenting to general practi-

Table 3 Duration of sore throat after consultation by selected subgroups. Values are median (interquartile range) duration of symptoms in days

Variable	Group 1 (antibiotics)	Group 2 (no antibiotics)	Group 3 (antibiotic offer delayed)	χ^2 test	P value
Single features prioritised in advance:					
Enlarged cervical glands (n=309)	4 (3-7)	4 (3-6)	5 (3-6)	0.67	0.7
Pharyngitis (n=374)	5 (3-7)	5 (3-7)	5 (3-7)	0.05	0.98
Other single features:					
No cough (n=200)	4 (2-6)	4 (3-6)	4 (3-6)	0.1	0.95
Tender cervical glands (n=189)	5 (3-7)	4 (2-6)	5 (3-7)	3.6	0.16
Age under 12 (n=149)	3 (2-5)	4 (2-6)	4 (3-5)	4.5	0.11
Dysphagia (n=395)	5 (3-6)	5 (3-7)	5 (3-7)	5.5	0.06
Temperature >37.5°C (n=98)	4 (2-5)	3 (2-5)	5 (4-7)	10.0	0.01
Tonsillitis (n=290)	4 (3-6)	4 (3-6)	5 (4-7)	2.7	0.25
Purulent exudate (n=94)	4 (3-6)	4 (3-6)	5 (4-7)	2.2	0.33
Multiple features prioritised in advance:					
Breese score >25 (n=285)	5 (3-7)	5 (3-8)	5 (3-7)	0.7	0.7
Symptom-sign complex* (n=94)	3 (2-5)	4 (2-5)	5 (3-7)	6.8	0.03

*Three of the following symptoms or signs: temperature >37.5°C, dysphagia, tender glands, no cough, purulent exudate.

Table 4 Satisfaction, belief, and intention of patients consulting doctor for sore throat. Values are numbers (percentages) scoring "very" or "moderate" on Likert scale

	Group 1 (antibiotics)	Group 2 (no antibiotics)	Group 3 (antibiotic offer delayed)	χ^2 test	P value
Satisfaction with consultation	202/211 (96)	166/184 (90)	165/177 (93)	4.7	0.09
Doctor dealt with worries	201/211 (95)	165/184 (90)	164/177 (93)	4.5	0.1
Likely to see doctor if sore throat recurs	148/187 (79)	87/162 (54)	92/162 (57)	27	0.001
Antibiotics are effective	181/207 (87)	95/173 (55)	99/165 (60)	55	0.001
Legitimation of illness					
Work or school*	128/209 (61)	117/184 (64)	96/177 (54)	3.56	0.17
Family or friends†	75/210 (36)	69/183 (38)	67/176 (38)	0.27	0.9

*Importance of seeing doctor to be able to take time off work or school.
†Importance of seeing doctor to be able to explain illness to family, friends, or acquaintances.

tioners, and a minority of those whose throat swabs test positive.[5 23 24] Also, throat swabs are also neither sensitive nor specific for serologically confirmed infection,[5 24-27] considerably increase costs, may medicalise illness, and alter few management decisions.[6] Thus using symptom clusters or throat swabs to target antibiotic prescribing is not well justified by current evidence.

Antibiotics may increase recurrence by altering pharyngeal flora and limiting the development of immunity.[28] Antibiotics would need to shorten the illness by more than 1.5 days to offset the likely 20% increase in relapse or recurrence with early antibiotics compared to delayed antibiotics (pooled results from three recent trials yield a conservative unweighted estimate of 90/220 (41%) for early antibiotics and 55/236 (23%) for delayed antibiotics[28-30]). Thus the net symptom burden is unlikely to be significantly improved by prescribing antibiotics for patients who are not very ill.

Key messages

- Sore throat is one of the commonest presentations of upper respiratory illness to general practitioners, and attendance is increasing
- Prescribing antibiotics for sore throat does not reduce the extent and duration of symptoms
- Prescribing antibiotics enhances belief in antibiotics and intention to consult
- Legitimation of illness is an important reason for attending the doctor
- Satisfaction predicts duration of illness and closely relates to how well concerns are dealt with—unless patients are very ill, general practitioners should consider exploring concerns and should avoid or delay prescribing antibiotics

Psychosocial issues

This study shows that "legitimation" of illness—either for work purposes or to family and friends—is an important factor in attending the doctor. This is consistent with Parsons's classic model where the doctor provides gatekeeping to the sick role.[31] The prevalence of these reasons for attendance suggests that further research could evaluate the effect of exploring these issues with patients or employers.

Patients prescribed antibiotics initially were more likely to think antibiotics were effective and to intend coming back in the future. Such side effects of prescribing—in addition to the medical side effects of antibiotics[3 32] —must be taken into account when the consultation rate for minor illness is rapidly increasing.[19] Given the difficulty of changing perceptions in a single consultation, the effect of reinforcement by repeated messages over the longer term is likely to be greater than documented here.

All three groups had similar high percentages of patients who were very satisfied or moderately satisfied, but prescribing antibiotics resulted in more patients who were very satisfied. This suggests that some patients have considerable expectations for antibiotics—despite evidence that doctors overestimate such expectations.[33] Satisfaction is important because it contributes to the "humanity" of an intervention. Satisfaction also predicted the duration of illness—which was probably not mediated by antibiotic prescribing strategy since strategy itself did not significantly predict duration—and was closely related to dealing with patients' concerns. These findings are supported by evidence that satisfaction predicts compliance,[34] that psychological factors mediate development of upper respiratory illness,[35] that the doctor's approach to the consultation affects the patient's recovery,[36] and that more effective doctor-patient communication improves health outcomes.[37]

Conclusion

For most patients with sore throat presenting to their general practitioner, antibiotics only marginally affect the resolution of symptoms. Even after one consultation, prescribing antibiotics significantly enhances belief in antibiotics and intention to consult in the future when compared with the acceptable strategies of delayed or no antibiotic prescription. Psychosocial issues in the consultation are important: legitimation of illness is an important reason why people attend their general practitioner, and satisfaction is strongly related to effective management of patients' concerns and also to duration of illness. Therefore, unless patients with sore throat are very ill, doctors should consider exploring patient's concerns and avoid prescribing antibiotics—or offer antibiotics if symptoms persist for a few days. Immediate prescription is likely to encourage the medicalisation of a self limiting illness without altering the extent and duration of symptoms.

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Letting the job get to you

It is commonplace to say that pet owners become like their pets. We also assume that professional people become affected by what they do. Surgeons become more incisive, philosophers more thoughtful, lawyers more pedantic, and so on. What happens to psychiatrists?

I recently spent a month as Lundbeck visiting professor from the Royal College of Psychiatrists at the Indian National Institute of Mental Health Sciences in Bangalore. My hosts, Srinivasa Murthy and Mohan Isaacs, had prepared an extensive and demanding schedule in their renowned community mental health services so I readily accepted accommodation in the guest house on the institute campus rather than commute from a hotel.

I arrived exhausted at Bangalore after a stressful flight via Bombay to be taken by Professor Isaacs to the guest house. I took leave of my host, unpacked, and had a long, refreshing shower. Before going to bed I decided to photograph my rooms. Entering the bathroom I heard a rustling and out of the corner of my eye detected a darting movement that I was convinced was a snake. I withdrew, shaken, and called the janitor. He insisted that there were no snakes inside but called the security men who took 20 minutes to come but searched the bathroom carefully. They found neither snake nor any possible entry or exit and it was decided (with some mirth) that the psychiatric visitor was overwrought—jumpiness was not uncommon in overtired travellers in an exotic land—but to humour him he could change rooms. The next morning the whole event seemed a trivial overreaction and was soon forgotten.

On the fourth morning I awoke about 4 a m to the sound of gentle, hypnotic singing from outside my window. It was pitch black—no lights on in any of the surrounding houses and clearly nobody awake in the guest house. I assumed that this was a hypnagogic hallucination—a vivid hallucinatory experience at the threshold of sleep and waking, probably a dream—as it had stopped. It restarted despite my being, I was sure, fully awake. Not knowing what to make of it, I drifted off again. This time my hosts were more reassuring. No, I was not cracking up, I had heard singing in the night. It was a local harvest celebration which nobody had warned me of because the singing was so soft it rarely disturbed anyone other than those involved.

I had plenty of time over the next few days to ponder these two experiences. The first fitted well with current thinking about

psychotic experiences and the cognitive techniques being developed to help manage them. Emphasising how people can hallucinate in specific circumstances—for example, sleeplessness or fever—is an accepted approach to help psychotic patients accommodate to their illness. Having personal experience to draw on would increase my sensitivity to the technique. My reaction to both events was also a salutary reminder that the boundary between doctor and patient is often exaggerated in psychiatry. I was learning much about myself in India.

At the end of the week I got my first film developed. My perceptual distortion can be seen in the photograph. It is a fully mature black cobra and the hood is opening in threat. It was never discovered despite the drains being dug up and an expensive snake charmer employed.

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We welcome filler articles of up to 600 words on topics such as *A memorable patient, A paper that changed my practice, My most unfortunate mistake,* or any other piece conveying instruction, pathos, or humour. If possible the article should be supplied on a disk.