

Short Report

Postal follow up of patients with epilepsy

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ABSTRACT

Background. Epilepsy services in India are mostly located in urban areas and are often overcrowded. It is difficult, therefore, to organize long term management programmes. We report our experience at a tertiary referral centre on follow up of patients with epilepsy through regular postal review.

Methods. One hundred consecutive patients with epilepsy (63 men, 37 women, mean age 17 years) who had only seizures were followed up by post using a questionnaire, instead of reviewing them in a clinic. The safety, utility and efficiency of this system were evaluated.

Results. Sixty patients had generalized seizures, 30 had complex partial seizures and 10 had other types of seizures. The indication for shifting to postal review was good control of seizures in 87 cases and economic reasons in the remaining. Postal review constituted 60% of the total follow up period in 55 cases. Sixty-six patients could be maintained on postal review which was suspended or discontinued in 34 patients. Of these 34, 16 were returned to it after being seen in the clinic on a further occasion. Poor control of seizures, fresh medical or social problems, lack of confidence or a combination of these were the reasons for discontinuing the postal review. The economic benefit to a patient by way of savings in travel, incidental expenses and lost wages was estimated to be Rs 750 per annum. The work load in the epilepsy clinic was decreased by 40%. No serious medical problems or mortality were reported in the study population.

Conclusion. Systematic postal review is a cost-effective alternative to clinic review in the long term follow up of a certain group of patients with epilepsy.

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INTRODUCTION

The high prevalence of epilepsy in the community and its chronicity often lead to overcrowding in follow up clinics. This puts a heavy demand on the already overstretched medical infrastructure particularly in remote areas. General practitioners in villages and other peripheral areas are not

usually involved in the day-to-day management of epilepsy and thus patients tend to concentrate around the major urban centres. Many patients have to travel long distances to reach such centres at considerable cost and from places where proper transport services are lacking. This makes control of epilepsy very difficult.

Recently, we at the Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST) have started using postal review (PR) instead of clinic review (CR) for following up patients with epilepsy. Patients whose seizures are well controlled are encouraged to continue to see their local physicians, and maintain follow up with the Institute through regular correspondence. We presumed that the potential benefits of this system would include greater involvement of local doctors in the management of epilepsy and less crowding in larger centres. The cost of treatment (to the patients as well as to the state) would also probably be reduced. This report describes our experience with PR.

PATIENTS AND METHODS

SCTIMST is the only tertiary referral centre for neurological disorders in the state of Kerala (population 27 million). There are over 6000 patients with epilepsy under our care. Twenty-five patients are called to this clinic weekly for follow up by prior appointment as it is often not possible to arrange CR for more. These included, till recently, well-controlled patients. We decided to follow certain patients by PR. The patients chosen for PR were those: (i) in whom all preliminary investigations for epilepsy were completed, (ii) whose seizures were well controlled (occurring less than once a month), and (iii) who could not afford travel expenses to reach our clinic (even if their seizures were not adequately controlled).

These patients were advised to continue treatment with their local doctor but assured that doctors at SCTIMST would continue to supervise and control their medications through correspondence. Each patient selected for PR was given a questionnaire in the regional language or in English (Fig. 1). The questions related to (i) the details of the drug therapy, compliance, adverse effects of drugs if any, (ii) details of control of seizures, and (iii) weight, pregnancy, and other problems. Patients were asked to mail the completed questionnaire to SCTIMST. During this period they attended local clinics for periodic replenishment of drugs or in case of other problems. The medical records department would forward the completed questionnaire together with the appropriate case record to the concerned doctor at SCTIMST to prepare a reply. This reply (in the patient's mother tongue) was mailed to the patient. If the patient was doing well and could be continued on PR, another copy of the questionnaire was enclosed. The patient was advised to discuss our reply with his local doctor and continue the treatment. This cycle was repeated until the patient was called back to the clinic to terminate the treatment or for evaluation of any fresh problems that might have arisen (Fig. 2). On an average 13 PRs (12-16) were carried out every week.

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**EPILEPSY POSTAL REVIEW
SCTIMST, THIRUVANANTHAPURAM**

Name: _____

Hosp. No: _____

To be replied in _____ month

Please indicate your choice by

1. Have you changed your medicines since your last visit here. Yes No
2. Please give the details of your present medications

Name of drug	Strength of one tablet (mg)	No. of tablets per dose			
		Morning	Noon	Evening	Night

3. Do you have any side effect due to these medicines.

Excessive drowsiness	Unsteadiness problems and balance	Double vision
Gum thickening	Poor memory	Others (specify)

4. Details of seizures in the last six months. *[Specify major (with loss of consciousness and falling down) or minor (no loss of consciousness or falling down) seizure.]*

Month	Detail

5. Date of last seizure _____
6. Do you take the medicines regularly Yes No
7. Was there any particular reason for the last seizure? Yes No
(If yes, please describe it) _____
8. What is your exact weight _____ kg
9. (For married women only) Are you pregnant Yes No
If yes, how many months _____
10. Any other matter you would like to share with us

Date _____

Signature _____

Fig 1. Postal review inland letter (English version)

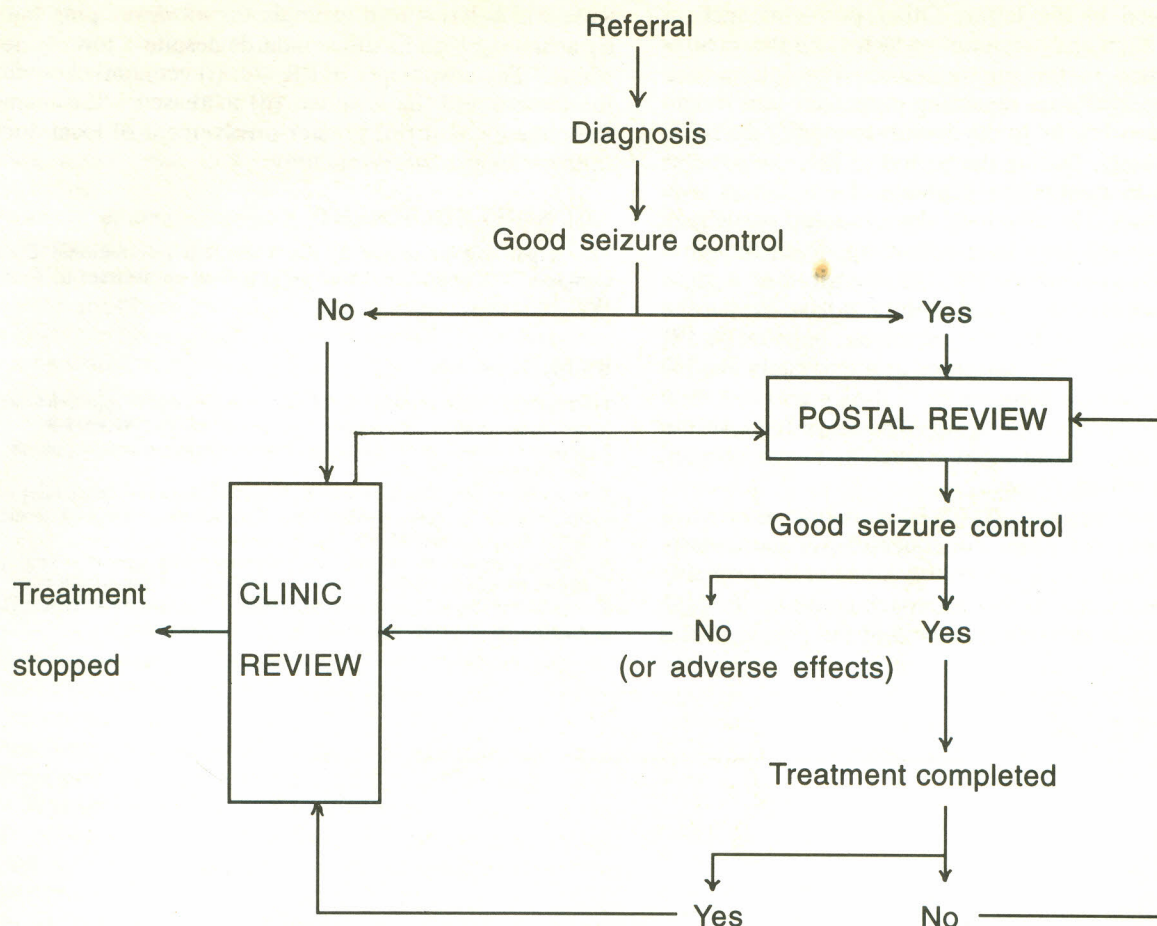


FIG 2. Algorithm of organization of postal and clinic review in the management of epilepsy

We have analysed here 100 consecutive PRs between June 1987 and July 1992 regarding the demography, clinical aspects of epilepsy and details of follow up. The total follow up period for each case (from the time of registration at SCTIMST to the last review) consisted of the clinic follow up period (CFP) and the PR period (PRP). The proportion of PRP was calculated as a percentage of the total follow up.

RESULTS

PRs of sixty-three men and 37 women were evaluated. Their mean age was 17 years (range 1–70 years). The mean distance from SCTIMST to their residence was 127 km (range 40–500 km). The family income of the patients was less than Rs 300 (US\$ 10) per month for 16 of them; Rs 301–1000 for 56, Rs 1001–1500 for 6; and more than Rs 1500 for 23 patients. Sixty patients had had generalized tonic clonic seizures, 30 had complex partial seizures and 10 had other types of seizures. PR was initiated in 87 patients because of good control of seizures. For the other 13 the criterion for PR was the great distance between their residence and SCTIMST. These patients had been on CR for a period ranging 1–127 months (mean 9.4 months) before they were shifted to PR. The PRP ranged from 1–61 months (mean 9.9 months). This was less than 21% of the total follow up period for 23 patients, 61–80% for 26 patients and more than 80% for 19 patients. Sixty-six per cent did not require any suspension of PR once started.

Poor control of seizures or fresh medical and social problems or lack of confidence in PR or a combination thereof were the reasons for interrupting or discontinuing PR. Fourteen patients, out of the 34, needed only one more CR and thereafter were returned to PR. The overall success rate of PR was 80%. The economic benefit to the patients and their family was estimated to be approximately Rs 750 (US\$ 23.4) per patient per annum by way of savings on travel, incidental expenses and lost wages. Since only 25 patients are reviewed in the weekly clinic, 12–16 PRs constituted a 40% reduction in the clinic work load. There was no episode of any drug-related complication or mortality in the study group.

DISCUSSION

We have shown that postal correspondence can be used to supplement CR in the long term management of patients with epilepsy, particularly where there is a shortage of medical expertise. Communication by post and telephone has been used previously to collect clinical and epidemiological data on epilepsy^{1–4} but there are no reports on the use of PR as an alternative method for regular follow up of these patients. Our study has shown that PR is a safe, useful and efficient alternative to CR in 80% of cases.

The questionnaire format of the review letter made the communication more relevant and easier to interpret. It was possible to quantify the seizure load according to the seizure

count mentioned in the letter. Other problems such as adverse drug effects and precipitating factors for the seizures are also included in the questionnaire. The information provided in the proforma regarding pregnancy and weight of the patient was helpful to the doctors to modify the treatment appropriately. During the period of PR, the patients were required to discuss the contents of our letters with their local doctors. Thus the local doctors could participate more actively in the long term follow up. Even though a few patients felt insecure on PR, the majority had a sense of increased independence, as they did not have to visit the hospital regularly. Besides, the economic benefits of PR were also attractive. The saving of approximately Rs 750 for patients per annum amounts to 15 days wages in a state where job opportunities are scarce. The work load on the clinic was also eased by 40%. As a result more complicated cases could be attended to.

Our experience suggests that PR is an efficient alternative to CR in the long term management of epilepsy, particularly when the seizures are well controlled. Some of the probable reasons for the success of this approach could be the high literacy rate and health consciousness of the people in this

state which has set an example for all developing nations by achieving high health standards despite a low economic status.⁵ The advantages of PR are: (i) economic benefits to the patient and the hospital, (ii) increased self-esteem for the patients, and (iii) greater involvement of local doctors in the management of epilepsy.

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REFERENCES

- 1 Chaplin JE, Yopez R, Shorvon S, Floyd M. A quantitative approach to measuring the social effects of epilepsy. *Neuroepidemiology* 1990;9:151-8.
- 2 Davies D, Scambler G. Attitudes towards epilepsy in general practice. *Int J Soc Psychiatry* 1998;34:5-12.
- 3 McCullough MA, Day S, Herlihy E, Rapp P. Using a multidisciplinary follow-up program to assist patient adjustment following temporal lobectomy. *J Neurosci Nurs* 1989;21:295-304.
- 4 Ottman R, Susser M, Hauser WA. Voluntary health agencies as target populations for epidemiologic research. *J Clin Epidemiol* 1988;41:979-84.
- 5 Franke RW, Chasin BH. Kerala State, India: Radical reform as development. *Int J Health Serv* 1992;22:139-56.

Obituaries

Many doctors in India practise medicine in difficult areas under trying circumstances and resist the attractions of better prospects in western countries and in the Middle East. They die without their contributions to our country being acknowledged.

The National Medical Journal of India wishes to recognize the efforts of these doctors in a new section 'Obituaries'. We invite short accounts of the life and work of a recently deceased colleague by a friend, student or relative. The account in about 500 to 1000 words should describe his education and training and highlight the achievements as well as the disappointments. A photograph should accompany this article.

—Editor