

FOLLOW-UP OF PATIENTS DISCHARGED AGAINST MEDICAL ADVICE IN TUBERCULOUS MENINGITIS STUDIES IN CHILDREN*

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Summary : A total of 395 TB meningitis patients were admitted for treatment comprising regimens containing Rifampicin with and without Pyrazinamide. Of these, 50 patients were discharged against medical advice before completing the prescribed therapy, most being too sick and put on dangerously ill list. On follow-up, all such patients were found to have died. Discharges due to other reasons like migration, economic and domestic problems etc., were low, i.e. 6%. Drop out of patients, thus, was not a serious problem in TB meningitis studies despite the fact that 62% of the patients were from outside Madras City. This was possible due to the initial and periodic motivation of the patients.

Introduction

Tuberculous meningitis is the most serious form of tuberculosis and carries high mortality and morbidity despite availability of potent bactericidal drugs. Even though the treatment period of most forms of tuberculosis has been reduced from the conventional 18 months to 6-9 months, this is a long period compared to treatment of non-specific acute conditions, and there is a tendency to default. The Tuberculosis Research Centre, Madras conducted four chemotherapy studies on 395 tuberculous meningitis patients in collaboration with the Institute of Child Health and Hospital for Children, Madras, from where the patients were drawn.

Patients aged between 1 and 12 years, who had not received more than 2 weeks of previous anti-tuberculosis treatment and had no evidence of renal or hepatic disease, were admitted to these studies. In the first 3 studies,¹ the patients were

treated with Rifampicin containing regimens with and without Pyrazinamide for a period of one year and in the last study with more intensive regimens for 9 months. The results, however, were similar in all the studies, irrespective of the regimens and duration, with a clear association between the stage of the disease on admission and the mortality, the latter being highest in patients admitted in stages II and III of the disease. All the survivors of the above four studies, except 2, were followed for a minimum period of 5 years, and a maximum of 10 years.

To ensure completeness, it was considered necessary to follow even the patients who were discharged against medical advice (DAMA) before completing the prescribed treatment. Accordingly, this was taken up as a study, which incidentally is the only one of its kind. Information was obtained from local patients by home visits and from outstation patients through correspondence. This paper covers the results of the above study.

Study population

The total number of patients admitted to the four chemotherapy studies were 395. Of these, 50 patients were discharged prematurely before completing the prescribed chemotherapy; 32 before completing the 2 months of intensive treatment and 58 after two months of treatment. Three of these patients could not be traced and the remaining 47 were followed for a period of five years.

Pretreatment characteristics of DAMA patients

On admission, 92% of the patients were classified as belonging to the severe stages of the disease, namely stages II and III, while only 8%

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Table 1 Stage of disease on admission and status at long term follow-up of patients discharged against medical advice

Stage	Total admitted	No. discharged		Follow-up status		
		Before 2mths	After 2 mths	No. died	No. alive	
I	69	4	2	2	1	3
II	300	41	26	15	33	8
III	26	2	2	0	2	0
Total	395	47	30*	17	36	11

* 27 patients died

were classified as Stage 1. A positive tuberculin test with 1 TU with an induration of 10 mm or more was present in 36% of the patients. A history of contact with a known case of pulmonary tuberculosis was elicited in 45% of patients and an abnormal chest radiograph suggestive of tuberculosis was present in 54%. The diagnosis of tuberculous meningitis was bacteriologically confirmed in 38% of the patients. In all, 62% of the patients were from outside Madras City.

Table 1 gives the disease stage of patients on admission and their status at long-term follow-up. It can be seen that of the 47 patients discharged against medical advice, 4 belonged to Stage I, 41 to Stage II and 2 to Stage III. Of the 4 stage I

patients, on follow-up, one had died while 3 others were alive. Of the 41 stage II patients, 33 died after discharge while only 8 were alive at long term follow-up. Both the stage III patients died after discharge. Thus, out of the 47 patients who were discharged prematurely, 36 had died at long term follow-up while only 11 survived. Majority of the deaths (27 of 36) occurred in the group of patients discharged before completing the first two months of intensive chemotherapy.

Table 2 gives the reasons for premature discharge and the status of the patients at long term follow up. Of the total 47 patients, 24 were discharged because of very good improvement or poor response to therapy, domestic/financial reasons, fear of surgery or migration to far-off places. The major chunk of patients so discharged comprised 23 who were very sick and put on dangerously ill list (DIL). The attendants of these patients were informed that the chances of survival were meagre. A premature discharge was sought in a majority of these patients because of the cost involved in transporting a dead child and for the sentimental feeling that the child be allowed to die at home. It is noteworthy that all the 23 patients put on dangerously ill list died (20 within a week of discharge and the others on the 10th, 12th and the 15th day of discharge). Of the 11 patients who were alive at follow-up, 7 had moderate and one had mild sequelae. Three

Table 2 Reasons for discharge against medical advice and status at long term follow-up

Reason	No.	No. died	Status at follow-up		
			Moderate sequelae	Mild sequelae	Complete recovery
Good improvement	5	1	1	0	3
No improvement	4	4	0	0	0
Domestic/financial	8	6	2	0	0
Fear of surgery	2	1	1	0	0
Migration	5	1	3	1	0
Dangerously III	23	23 [®]	0	0	0
Total	47	36	7*	1 [‡]	3*

[®] 20 patients died within 7 days of discharge

* 9 patients had anti-TB treatment for 3-6 months after discharge

Table 3 *Interval between discharge and death*

Stage	Total discharged	No. died	Week				Month		
			1	2	3	4	1	2	3
I	4	1	1	0	0	0	0	0	0
II	41	34	18	3	0	1	3	3	6
III	2	1	0	0	0	0	1	0	0
All	47	36	19	3	0	1	4	3	6

patients recovered completely (2 Stage I). Nine of these 11 patients (including the 3 patients with complete recovery), had received anti-tuberculosis therapy outside, for 3 to 6 months after discharge.

Table 3 gives the time interval between discharge and death. Of the 36 deaths, 23 occurred within 4 weeks of discharge while the remaining 13 died after 1 month of discharge.

Conclusions

1. A very high proportion (94%) of patients discharged before completing the prescribed treatment could be followed for 5 years despite the fact that 62% of the patients were from outside Madras City.
2. The outstation patients responded promptly to our letters, and the local patients to the visits by the Social Workers. This cooperation indicates that the parents had genuine reasons for asking for premature discharge.
3. The mortality among these patients was very

high. In all, 36 to 47 patients died. This includes the 23 patients who were very sick and put on dangerously ill list. Excluding these 23 deaths, premature discharges due to other reasons were 6% only.

4. Drop-out of patients, thus, was not a serious problem in the tuberculous meningitis studies.

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Reference

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