

Use of the Brief MAST Interview to Detect Alcoholics in a Tuberculous Population

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THE TUBERCULOUS patient who is also an alcoholic presents a particular problem in that he is likely to interrupt his chemotherapy, as Edsall (1) and Grzybowski (2) and co-workers have reported. These authors cited the high incidence of alcoholism among patients with reactivated pulmonary tuberculosis and implicated interrupted chemotherapy as the major factor leading to reactivation. If alcoholism had been suspected earlier, many of the problems associated with treating these patients might have been avoided. Unfortunately, in the past there was no way to quickly detect alcoholism in tuberculous patients.

Recently, however, Pokorny and co-workers (3) reported that a shortened version of the Michigan Alcoholism Screening Test (the brief MAST) provided an effective means for quickly detecting patients with suspected alcoholism. We therefore conducted a study to determine whether the New Orleans Tuberculosis Clinic could use this test to detect possible alcoholics in a popula-

tion receiving antituberculosis chemotherapy. We also sought to determine whether one segment of the clinic population was more likely to suffer from alcoholism than the rest.

Screening Procedures

The brief MAST (3,4) was offered seriatim to 102 adult patients, ages 21–76 years, with active pulmonary tuberculosis. These patients attended the New Orleans Tuberculosis Clinic between October 3 and November 14, 1972. Devised to provide a consistent, quantifiable, structured interview instrument for the detection of alcoholism, the brief MAST consists of 10 questions, which are scored so that the more discriminatory questions are given the greater weight (table 1).

The brief MAST interviews were conducted by the four New Orleans Health Department nurses who regularly interview patients attending the New Orleans Tuberculosis Clinic. Before each interview, the nurse discussed the purpose, procedure, possible therapeutic benefit, and scientific nature of the study with the patient and, on occasion, with the patient's relatives.

Brief MAST Interviews

Mechanics. It took from 5 to 15 minutes to complete a brief MAST interview. Generally, the nurses found that patients who had attended the clinic for some time (a month or more) responded more quickly than the newer patients. Most patients appeared to accept the interview as a matter of clinic routine. For such patients, the nurses considered lengthy explanations superfluous and, in fact, the nurses' explanations were largely ignored by patients who seemed willing to cooperate.

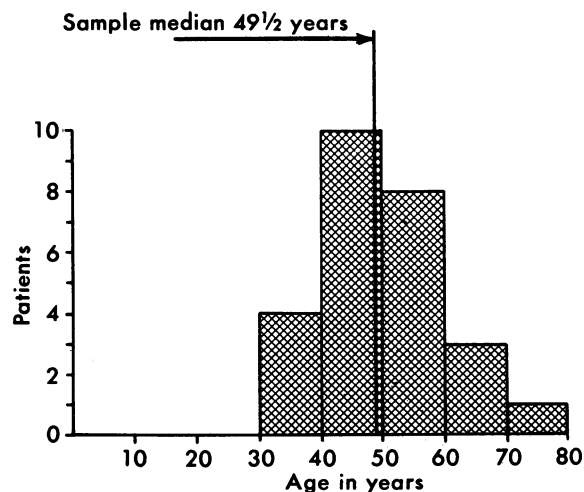
Patient acceptance. The racially mixed (black and white) group of patients accepted the inter-

Table 1. The brief MAST interview

Question	Circle correct answer	
1. Do you feel you are a normal drinker?	Yes (0)	No (2)
2. Do friends or relatives think you are a normal drinker?	Yes (0)	No (2)
3. Have you ever attended a meeting of Alcoholics Anonymous (AA)?	Yes (5)	No (0)
4. Have you ever lost friends or girlfriends/boyfriends because of drinking?	Yes (2)	No (0)
5. Have you ever gotten into trouble because of drinking?	Yes (2)	No (0)
6. Have you ever neglected your obligations, your family, or your work for two or more days in a row because you were drinking?	Yes (2)	No (0)
7. Have you ever had delirium tremens (DTs), severe shaking, heard voices or seen things that weren't there after heavy drinking?	Yes (2)	No (0)
8. Have you ever gone to anyone for help about your drinking?	Yes (5)	No (0)
9. Have you ever been in a hospital because of drinking?	Yes (5)	No (0)
10. Have you ever been arrested for drunk driving or driving after drinking?	Yes (2)	No (0)

NOTE: Figures in parentheses are scores. A patient with a score of 6 or more points is suspected to be alcoholic.

Age distribution of 26 tuberculosis patients with brief MAST scores of 6 or more



view surprisingly well. The nurses conducting the interviews noted that the responses were rapid and that they rarely had to repeat a question. Five patients whose high brief MAST scores indicated possible alcoholism said that they either had stopped drinking or intended to stop. Most important, of the 102 patients chosen for interview only one declined to answer the questions.

Results

Incidence of alcoholism. Of the 101 patients interviewed, 26 had brief MAST scores that indicated alcoholism (6 or more points), as shown in the following table.

Weighted scores	Number of patients
0-5	75
6-11	8
12-17	3
18-25	10
26-29	5

Age and sex. The median age of the 26 patients with scores that indicated alcoholism was 49½ years, as shown in the chart. The interval estimate for the median age of these patients was $P(43 \text{ years} < M < 55 \text{ years}) = 97.10$.

Comparisons between the alcoholic and nonalcoholic tuberculous patients, however, showed no significant differences between the two groups with respect to age ($X^2=0.1$ with 4 degrees of freedom), as shown in table 2.

Similarly, the following distribution of the alcoholic and nonalcoholic tuberculous patients by sex showed no significant difference ($X^2=0.805237$).

Brief MAST scores	Men	Women
0-5	55	20
6 or more	22	4

Discussion

The efficacy of the brief MAST has been demonstrated by Pokorny and associates (3). In their study, however, psychiatrically oriented personnel did the testing. We sought to determine (a)

Table 2. Distribution of alcoholic and non-alcoholic tuberculous patients, by age groups

Age group (years)	Nonalcoholic ¹	Alcoholic ²	Total patients
21-30	12	0	12
31-40	5	4	9
41-50	22	10	32
51-60	22	7	29
61-70	11	4	15
70 and over	3	1	4
Total	75	26	101

¹ Patients with brief MAST scores up to 5 points.

² Patients with brief MAST scores of 6 points or more.

whether the health department nurses could conduct the brief MAST interview without undue difficulty and (b) whether the patients attending the New Orleans Tuberculosis Clinic would cooperate.

We found that the health department nurses who regularly interview patients at the clinic could carry out the brief MAST interview easily and quickly, in 5 to 15 minutes. Also, patient acceptance was good. Only one of the 102 patients refused to answer the brief MAST questions.

We tried to determine whether any one segment of the clinic population (men or women, young or old) was more likely to suffer from alcoholism than the rest. We were not successful. In the sample, most of the suspected alcoholics were men between 43 and 55 years old, but so were most of the nonalcoholics. Chance alone could have accounted for the age-sex distribution of suspected alcoholics in the sample population.

The prevalence of alcoholism in the sample population was disturbing, because alcoholism has been strongly associated with interruption of anti-tuberculosis treatment (1,2,5). We intend, therefore, to develop a program for alcoholic patients at the New Orleans Tuberculosis Clinic that will include close supervision, continual counseling, prompt utilization of medical-social services, and

referral to one of the city's alcoholism treatment centers.

The brief MAST interview, we believe, will provide a suitable instrument for quickly detecting suspected alcoholism in the tuberculosis patients who attend the clinic. Patients who are identified as alcoholic can then be given the help needed to complete their chemotherapy before it has been interrupted.

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Since alcoholism is strongly associated with interruption of anti-tuberculosis treatment, a study was made to determine if the New Orleans Tuberculosis Clinic could use the brief MAST (the shortened version of the Michigan Alcoholism Screening Test) to detect possible alcoholics in a sample population receiving anti-tuberculosis chemotherapy.

The nurses of the New Orleans

Health Department who regularly interview tuberculosis patients at the clinic were able to conduct the brief MAST interview satisfactorily, in 5 to 15 minutes, and patient acceptance was good. Only one of the 102 patients with active tuberculosis, who were seen consecutively for the brief MAST interview, refused to cooperate.

The brief MAST interview provided the New Orleans Tuberculosis Clinic with a suitable instrument for quickly detecting suspected alcoholism among its patients. The prevalence of suspected alcoholism in the sample population indicated that additional measures were needed to help alcoholic patients complete their antituberculosis chemotherapy without interruption.