AMP-rated Psychopathology in Chronic Alcoholics*

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Summary. In a group of 39 alcoholics within a withdrawal process, the psychical situation was rated using AMP scales (Angst et al. 1969). Cluster analysis of the items rendered the following five-cluster solution: (1) "aggressive-depressive" patients, (2) "less impaired" persons, (3) "slowed persons with diminished contact", (4) "emotionally inadequate" persons, (5) "appealing depressive" persons. These results are discussed with respect to other data from clinical history and diagnostic findings.

Key words: Chronic alcoholism – AMP rating – Cluster analysis – Alcohol withdrawal

Introduction

Application of the AMP system (Angst et al. 1969) has recently proved rewarding in new approaches to classifying endogenous psychoses (Angst et al. 1983) and in the description of psychopathology following open-heart surgery (Dahme and Götze 1980; Götze 1980). Thus, it was tempting to use if for the rating and description of psychiatric findings in chronic alcoholics as part of a psychophysiological examination of the alcohol withdrawal syndrome. Our research was further motivated by the apparent lack of interest in the psychopathology of chronic alcoholics in recent years (Blashfield 1984, who also gives a comprehensive survey of the literature).

In our approach, cluster analysis resulted in highly differentiated subgroupings of the patients, which appear worthy of communication under the aspects of specifity versus homogeneity of clearly defined clinical samples.

Material

Actual psychopathology within a 1-h psychophysiological examination was rated for 39 male alcoholics (mean age 38.7 years, mean duration of alcoholism 11.9 years, mean daily consumption 313 g/day). Delirium tremens had been found in 12 patients, and pre-delirious symptoms in 27 patients. At an average of 3.1 days after admission to hospital, the condition

of the patients had improved such that simple mental tests (calculations, digit memory span from the "Hamburg Wechsler Test of Intelligence", "HAWIE") and a psychophysiological examination could in principal be administered. This day of "first testability" was individually assessed and served as a reference for dividing the sample into four experimental groups: Group I ($n = 10$) was examined immediately on the 1st day, group II ($n = 9$) on the 5th, group III ($n = 10$) on the 9th, and group IV ($n = 10$) on the 13th day of individual testability. Patients aged over 50 years, or with severe dementia, other diseases of the CNS, severe cerebral trauma, severe internal diseases or with abuse of additional substances, were excluded from the examination.

Method

AMP ratings were performed by an experienced psychiatrist (W.S.), using the scales for actual psychic findings (Scharfetter 1972). Because of the well-known range of symptoms of these patients, the following themes were omitted: disturbances of consciousness and orientation, delusions, hallucinations, disturbances of ego and personality. The remaining 33 items (items with extremely low mean scale values also being excluded) were submitted to cluster analysis, following the k-means procedure (McQueen 1967). F-tests for experimental groups between clusters were compared to the conservative Scheffé post-hoc criterion at the 5% level. A German-English translation of the AMP items is given in Table 1.

Results

A. Psychopathology

The five-cluster solution, comprising statistically sound groupings, high psychopathological differentiation and acceptable cluster sizes, will be presented in detail.

As a first important result, the cases in one of the experimental groups had no salient influence on the formation of clusters. Thus, the AMP data did not reflect the state within the withdrawal process, possibly because "testability" already implied a considerable recovery for all groups.

We further found a "basal syndrome", containing items without significant inter-cluster differences: disturbances of concentration and memory, tension and enhanced drive.

Table 1. German-English translations of AMP items

1. Auffassungsstörung − Disturbance of comprehension
2. Konzentrationsstörung − Disturbance of concentration
3. Merkfähigkeitsstörung − Disturbance of concentration
4. Gedächtnisstörung − Disturbance of memory
5. Verlangsamung − (general psychic) slowing
6. Hypochondrie − hypochondriasis
7. Deprimiert − depressed
8. Hoffnungslos − hopeless
9. Ängstlich − anxious
10. Euphorisch − euphoric
11. Dysphorisch − dysphoric
12. Mißtrauisch − suspicious
13. Gespannt − tense
14. Innere Unruhe − inner restlessness
15. Klagsam − plaintive
16. Läppisch − trifling
17. Insuffizienz − feeling of insufficiency
18. Schuldgefühle − feeling of guilt
19. Affektiv inadäquat − affective inadequacy
20. Logorrhoe − talkativeness
21. Antriebsgesteigert − enhanced drive
22. Motorisch unruhig − motor restlessness
23. Kontaktvermindert − diminished contact
24. Kontaktvermehrt − augmented contact
25. Krankheitsgefühl − feeling of illness
26. Krankheitseinsicht − comprehension of illness
27. Ablehnung der Behandlung − refusal of treatment
28. Aggression − aggression
29. Pflegebedürftig − needs hospital care
30. Intelligenz − intelligence
31. Amnesie − amnesia
32. Depression − depression

Significant variation of items, however, established the following clusters:

Cluster 1 (n = 4): "Aggressive-depressive" Patients. This smallest cluster showed the highest values for the items "depressed", "dysphoric", "suspicious", "aggressive", "plaintive", "hypochondriasis". High ratings were also given for "feeling of insufficiency", "inner restlessness" and "feeling of guilt". In these patients, rejection of treatment occurred rather often.

Cluster 2 (n = 11): "Less Impaired" Patients. The patients of this cluster had significantly lower ratings for "disturbances of

comprehension", "trifling attitude" and "plaintiveness", and the lowest for "need of hospital care". They often had an intact intelligence.

This cluster was the only one to show a remarkable composition with respect to experimental grouping: it was dominated by group II (5 patients) and lacked members of group I. This cluster possibly contains a larger number of patients receiving a well-balanced chlormethiazole regimen.

Cluster 3 (n = 7): "Slowed" Patients with "Diminished Contact". As indicated by the name of this cluster, it contained maxima for "slowed", "diminished contact", "diminished intelligence", and low means for "motor restlessness", "feeling of illness", "comprehension of illness", "plaintive" and "aggressive".

Cluster 4 (n = 9): Emotionally Inadequate Patients. Patients from this cluster had significantly high ratings with "trifling" and "euphoric" (without diminished intelligence!). Accordingly, they were very seldom "hypochondriac", "anxious", and "plaintive". "Feeling" and "comprehension" of illness were rare, the need for hospital care, however, was not diminished.

Cluster 5 (n = 8): Appealing Depressive Patients. With high values for "depressed", "inner restlessness", feeling of "insufficiency" and of "guilt", this cluster displayed some resemblance to cluster 1. It differed from it, however, by low suspiciousness and dysphoria, and high means for "augmented contact" and "feeling of illness". None of the patients reject treatment. "Need of hospital care" was rated highest of all clusters. Yet, there is no dominance of acute cases, the cluster is composed in equal parts of patients from groups I, III, and IV.

B) Further Results

The psychopathological findings are complemented by other clinical data. Table 2 contains some items from the drinking history, symptomatology and prognosis. As to duration of abuse and daily alcohol intake, cluster 4 had high and cluster 2 low means. The same tendency was found for glutamyl-pyruvate transaminase (GPT) as an indicator of liver damage. Contrary to pre-delirious states, full delirium tremens had the highest incidence in cluster 4. Unfortunately, findings from CT are too sparse in our material to speculate on cerebral atrophy. In this context, some neuropsychological results appear rather puzzling: digit memory span from the HAWIE

Table 2. Distribution of anamnestic and diagnostic items on clusters, with mean and standard deviation, or absolute values of incidence N and relative values in the given cluster (. .)

Cluster No.	n	Duration of alcohol (years) $\bar{x}$ / s	Alcohol consumption consumption (g/day) $\bar{x}$ / s	GPT $\bar{x}$ / s	Full delirium N / $\%_{CL}$	Social decline N / $\%_{CL}$	Interest for for therapy N / $\%_{CL}$	"Good" prognosis N / $\%_{CL}$
1	4	9.25 / 6.83	292.00 / 118.67	31.25 / 9.98	0 / 0	1 / 25	1 / 25	1 / 25
2	11	8.18 / 6.07[a]	256.82 / 155.16	34.00 / 24.49	2 / 18	8 / 73	8 / 73	5 / 46
3	7	12.29 / 3.95	333.71 / 143.84	59.57 / 50.91	2 / 29	1 / 14	3 / 43	2 / 29
4	9	14.78 / 5.41[a]	362.11 / 197.31	63.33 / 91.99	5 / 56	4 / 44	2 / 22	1 / 11
5	8	13.38 / 5.50	268.25 / 106.97	41.37 / 32.22	3 / 38	4 / 50	4 / 50	1 / 13
Total	39	11.87 / 6.08	292.79 / 157.52	46.59 / 54.59	12 / 31	18 / 46	18 / 46	10 / 26

[a] Cluster 2 and 4: significant difference of means (t-test, $df = 18$, $P < 0.01$). Also see text. Significance was tested for duration, consumption and GPT only

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showed neither significant inter-cluster differences nor significant deviations from the age-corrected norms for normal persons (Wechsler 1964). In contrast to their relatively stable psychical condition, social decline was found in nearly all patients from cluster 2. The patients of this cluster also showed the highest interest in further psychotherapy, as documented by participation in an introductory interview. A tentative judgment of prognosis, inferred from the the patients' complete record (which is of course of limited value only), gave best results for patients of cluster 2, and worst for those of cluster 4,—without consideration of AMP data. Age showed no significant inter-cluster differences.

Discussion

A validation of the results presented (which are only part of a larger amount of data) has to consider the descriptive purpose of this study. We were not going to depict the "personality of alcoholics". We were interested instead in the prospects of rating and documenting psychopathological findings in alcoholics (within a withdrawal process) even after a relatively short time of examination, by use of the AMP system, and in the emerging cluster analytical structures.

Our expectations were surpassed in several aspects. Considering the levelling effects of withdrawal, chlormethiazole (which was given to all patients), criteria of testability and of exclusion from the experimental sample, we had expected a rather homogeneous group of patients. Instead, the taxometric results were highly differentiated, taking into consideration the relatively small size of our sample.

There were interesting correspondences between psychopathology and data from other findings and case histories. The less impaired patients from cluster 2, for instance, have a somewhat more favourable alcoholic record, while their social one is outstandingly bad. Possibly as a result of both, their interest in psychotherapeutical help is great. We were not so astonished to find more positive prognostic judgments here.

In contrast to this, the patients of cluster 4 showing a high incidence of emotional inadequacy and euphoric behaviour, are inclined to heavy indulgence, have a long alcoholic record and a high incidence of liver damage and fully developed delirium tremens. Only one of these patients was judged to have a "good" prognosis. Their interest in psychotherapy is lowest. Here comparable to the more "retarded" patients of cluster 3, the question of cerebro-organic damage arises. As already mentioned, CT evidence is lacking. According to Goldstein and Shelly (1980), however, CT is a questionable method in post-alcoholic psycho-organic damage. In any case, the possibility of dementia, at least in an early stage, cannot be excluded in the patients of clusters 3 and 4.

The question of a psycho-organic "basal syndrome", in the whole sample should be discussed with even more caution, although it might be forwarded by the ubiquitous appearance of disturbances of concentration and memory, evident from the AMP ratings. With respect to the normal results of the digit memory span (contradicting Wechsler's own findings in

alcoholics), evidence for a conspicuous psycho-organic syndrome in all of our patients is not strong enough.

A central result appears to be the high incidence of depressive reactions: similar findings with the MMPI have been reported by Blashfield (1984) Our cluster analyses show two types of depressive behaviour: an aggressive, refusing variant (cluster 1) and an appealing one (cluster 5). Interestingly enough, the latter did not show a positive prognosis.

Finally, the representativeness of our findings should be considered limited, of course, to the psychic situation of alcoholic patients during withdrawal. In the light of accumulating data (Blashfield 1984; Feuerlein 1983) we tend to give credit to the notion of reliably separable subgroups of alcoholic patients. Different samples, in addition, might give rise to still other clusters, e.g. patients with dementia were under-represented in our sample. Yet, irrespective of the reproducibility of our results, the psychical situation of alcoholic patients during withdrawal should be studied with some emphasis. This could prove relevant beyond the psychopathological and taxonomic scientific interest. Indications for later therapeutic measures should possibly take into account the heterogeneity of alcoholic patients during withdrawal. The AMP system was able to document important aspects of this heterogeneity in an easy and fast way.

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