

## SHORT COMMUNICATION

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## **OLITA: an alternative in the treatment of therapy-resistant chronic alcoholics**

### **First evaluation of a new approach**

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**Abstract** The Outpatient Long-term Intensive Therapy for Alcoholics (OLITA) is a four-step program of care for severely affected chronic alcoholics which, after inpatient detoxification, extends over a total of 2 years. High-frequency short-term individual therapeutic contacts, initially daily, are followed by a slow tapering of individual contact frequency and resolve in a group session once weekly towards the end of the second abstinent year. Further elements of OLITA are: (a) induction of alcohol intolerance by the application of aldehyde dehydrogenase inhibitors; (b) introduction of control factors, i.e. controlled intake of deterrent medication and regular urine analysis for alcohol; and (c) allocation of responsibility to the patient with respect to the overall success of the therapeutic concept including his own physical rehabilitation. Thus far, 30 male alcoholic patients from two recruitment periods have been treated for 6–26 months with a success rate of 60% abstinent patients. In conclusion, OLITA, based on the gradual tapering of high-frequency therapeutic contacts, thus far unique among outpatient programs for alcoholics, represents a promising advance in the treatment of therapy-resistant chronic alcoholics.

**Key words** Alcoholism treatment · Outpatient · High-frequency therapy · Four-step program · Therapy-resistant alcoholics · Deterrent medication · Urine analysis

### **Introduction**

The treatment of alcoholism is complicated by a high relapse rate, despite extensive and expensive therapeutic endeavours (Hunt et al. 1971). Therapeutic regimens include (a) the inpatient approach, consisting of a 6-week to 3-month treatment period in a hospital (in Germany frequently extending to 6 months or more), or (b) outpatient care, comprising predominantly group therapies or individual psychotherapies of usually no more than two sessions per week. Success rates of these therapies range from 20 to 40%, and extend in some inpatient settings to 60% (Emrick 1974; Costello 1975; Armor et al. 1976; Polich et al. 1980; Küfner and Feuerlein 1989; McKay and Maisto 1993). This considerable variation appears to depend in part on the definition of success (abstinence or reduction of alcohol consumption), the respective observation/follow-up time and the selection of patients (McKay and Maisto 1993).

Herein we describe a new therapeutic approach which originated from the necessity to keep severely affected chronic alcoholics strictly abstinent over a 12-week outpatient program for an endocrinological research study. Based on this initial 12-week period, we developed a four-step system of care for the outpatient treatment of alcoholics. A total of 30 male alcoholics with an average duration of alcohol dependence of nearly 20 years, most of them with previously failed inpatient therapies and a high degree of social detachment, have participated thus far in the Outpatient Long-term Intensive Therapy for Alcoholics (OLITA). A success rate of 60% over an observation period of 6–26 months prompted us to submit a first report on this new phasic therapeutic concept.

### **Subjects and methods**

#### **OLITA participants**

A total of 30 male severely affected chronic alcoholics have participated in the OLITA-program (OLITA I and II) thus far. The inclusion criteria were: male, age 25–58 years,  $\geq 5$  years of alcohol

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dependence according to DSM-IV criteria, distinct withdrawal symptoms, inpatient detoxification, if necessary, with clomethiazole (Distraneurin, Astra, Wedel, Germany), no abuse of any additional substances (with the exception of nicotine and caffeine), no severe diseases apart from alcoholism, e.g. cardiac, renal or liver failure, or major neurological or psychiatric disorders. Only "therapy-resistant" chronic alcoholics, i.e. patients with several inpatient detoxification treatments and at least one failed inpatient long-term therapy, or socially detached patients refusing any kind of inpatient treatment were selected.

In OLITA I, 11 patients participated (age  $42.8 \pm 6.6$  years; duration of alcohol dependence  $19.1 \pm 7.0$  years; inpatient alcohol detoxification treatments  $5.5 \pm 3.5$ ; inpatient long-term alcoholism therapies  $1.1 \pm 0.9$ ), whereas 19 patients were recruited for OLITA II (age  $43.4 \pm 8.2$  years; duration of alcohol dependence  $17.1 \pm 7.3$  years; inpatient alcohol detoxification treatments  $4.3 \pm 5.0$ ; inpatient long-term alcoholism therapies  $0.7 \pm 1.0$ ).

### Control groups

A random assignment of severely affected chronic alcoholic patients to OLITA vs a less intensive outpatient program was not approved by the Ethical Committee. Therefore, other methods of controlling for the outcome of OLITA were used: intra-individual controls and case controls.

#### *Intra-individual controls for OLITA participants*

In order to compare the efficiency of OLITA with previous efforts of the individual participants to achieve abstinence, the penultimate as well as the last abstinent periods of individuals were determined, based on the subjects' own reports as well as on records of hospitals and/or health insurances involved.

#### *Case controls for OLITA-I patients (inter-individual controls)*

To compare the outcome of OLITA-I patients with the outcome of a similar group of patients, 10 male alcoholics were selected retrospectively from the patients who had presented to our hospital at approximately the same time for inpatient detoxification. These subjects fulfilled the criteria of "twin cases" with respect to age ( $42.3 \pm 5.0$  years), duration of alcohol dependence ( $18.5 \pm 6.0$  years), number of detoxifications ( $6.1 \pm 2.5$ ) and failed inpatient therapies ( $1.6 \pm 0.7$ ) as closely as possible. They only differed with respect to post-detoxification treatment (no therapy,  $n = 5$ ; long-term inpatient therapy,  $n = 3$ ; deterrent medication without therapy,  $n = 2$ ). No adequate case control could be found for one patient of OLITA I who therefore had to be excluded from this inter-individual evaluation.

The therapeutic concept as it has evolved from the original task to keep alcoholics strictly abstinent for an endocrinological research study was approved by the Committee for Medical Ethics of the Medical Faculty of Georg August University (Göttingen, Germany). The concept comprises four main elements:

1. *Short-term contacts*, initially daily, followed by a slow tapering of contact frequency over a total of 2 years: Over the first 3–6 months, contacts focus on psychosocial problems, whereas later, psychological issues of the individual patient are addressed specifically.
2. *Creation of alcohol intolerance* by the application of aldehyde dehydrogenase inhibitors (disulfiram, Antabus, Tosse, Hamburg, Germany; calcium carbimide, Dipsan, Lederle, Montreal, Canada) (Levy et al. 1967; Banys 1988).
3. *External control*, controlled intake of deterrent medication, urine analysis for alcohol and, if necessary, for other substances of abuse (Milby et al. 1980).
4. *Allocation of responsibility* to the patient with respect to the overall success of the therapeutic concept including his own physical rehabilitation.

Before entering OLITA, patients are comprehensively informed about the treatment and have to give their written consent (therapeutic contract) by the end of the inpatient detoxification period. They are aware that the therapeutic appointments are obligatory, that travel, etc., can only be planned for regular contact-free intervals and that any violation of abstinence (any relapse, i.e. any consumption of ethanol, detected or reported) usually leads to an exclusion from OLITA. A supervised disulfiram–alcohol challenge as performed during early experience with disulfiram is not integrated in our program because presently, experts recommend strongly against its use (McNichol et al. 1987; Soyka 1995). Instead, patients are repeatedly given a clear and detailed description of the disulfiram–ethanol reaction.

The therapeutic team consists of four to five therapists: two psychiatrists and two to three Ph.D./medical students in their final year. Regular team sessions take place twice a week.

### OLITA outpatient four-step system of care

The following is the OLITA outpatient system of care:

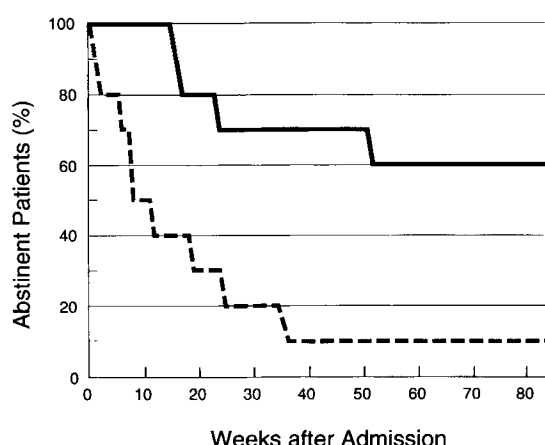
1. *Inpatient period: detoxification*. During the inpatient alcohol detoxification treatment, regular contacts are established between the therapist and the patient. The daily intake of calcium carbimide (Dipsan, Lederle; 50 mg) as well as urine controls are initiated.
2. *Outpatient period I: intensive phase*. For 3 months, daily (including weekends and holidays) contacts of 15 min, including controlled intake of calcium carbimide (Dipsan, Lederle; 50 mg) and urine analysis, take place.
3. *Outpatient period II: stabilizing phase*. This phase extends to another 3 months with contacts three times a week (maximum interval 2 contact-free days), 15 min each, controlled intake of disulfiram (Antabus, Tosse; 500 mg) and urine analysis.
4. *Outpatient period III: weaning-off phase*. For 6 months, up to the end of the first abstinent year, contacts are maintained twice weekly (maximum interval 4 contact-free days), 30 min each, together with controlled intake of disulfiram (Antabus, Tosse; 500 mg) and urine analysis.
5. *Outpatient period IV: attendance with potential crisis management*. After the first abstinent year, patients continue for 6 months with one individual contact of 30 min as well as one group session per week ("OLITA group", accompanied by a therapist), including the controlled intake of disulfiram (Antabus, Tosse; 500 mg) and urine analysis. In agreement with the patient, deterrent medication and/or individual contacts are gradually reduced. Participation in the OLITA group is obligatory up to the end of the second abstinent year, and voluntary thereafter. During each of the phases II through IV, a return to shorter intervals between contacts in cases of crises, i.e. threatening relapse, can be offered.

### Statistical analysis

For statistical analysis, the ANOVA procedure for repeated measures has been used, followed by the Scheffe test. A  $p$ -value of  $< 0.05$  is considered statistically significant. To demonstrate the outcome of alcoholism treatments with respect to abstinence, the calculation of survival curves by the Kaplan-Meier method has been applied (Poikolainen 1983), using the STATISTICA package.

## Results

After an observation time of 6–26 months in a total of 30 male alcoholic patients, the abstinence rate achieved with OLITA is 18 of 30 (60%), with a comparable preliminary outcome of patients from the two recruitment periods [OLITA I: 6 of 11 (55%), observation time  $97 \pm 13$  weeks;



**Fig. 1** Inter-individual comparison (case control analysis) of abstinent periods in OLITA-I patients ( $n = 10$ ; solid line) vs "twin cases" in alternative treatments ( $n = 10$ ; dashed line). Survival curve presentation (Poikolainen 1983)

OLITA II: 12 of 19 (63%), observation time  $34 \pm 8$  weeks]. Premature dropouts [12 of 30 (40%)] are treated identically, independent of whether they had a relapse or not. In fact, 4 out of the 12 dropouts (one third) left the program because they could no longer accept the therapeutic setting. Eight patients were dismissed after a relapse.

In patients of both recruitments, OLITA I and II, the last ( $13.4 \pm 9.3$  and  $11.7 \pm 11.8$  weeks, respectively) as well as the penultimate abstinent period ( $17.4 \pm 18.8$  and  $9.4 \pm 13.1$  weeks) before OLITA is significantly shorter ( $p < 0.01$ ) as compared with the abstinent period during OLITA I and II ( $64.6 \pm 39.4$  and  $29.8 \pm 9.9$ ). There is no tendency towards a gradual increase in abstinent periods within the patient population. With respect to the number of abstinent weeks, even the 12 dropouts of the two recruitments show a significant improvement during OLITA ( $p < 0.05$ ) as compared with both abstinent phases prior to entering treatment ( $11.0 \pm 9.4$  and  $12.3 \pm 12.3$  vs  $23.4 \pm 10.7$  weeks). A comparison of patients undergoing OLITA I with a retrospectively selected control group having received various alternative post-detoxification treatments illustrates the considerable difference in outcome (Fig. 1).

OLITA participants showed a consistent improvement in their general health as documented by regular physical examinations and blood workups. Data were regularly discussed with the patients who became increasingly interested in their overall biomedical rehabilitation. As deterrent medication, calcium carbimide was used for phase I because of its shorter half life (daily intake; "therapeutic ritual" linked to each contact) and switched to disulfiram in phase II (Levy et al. 1967; Banys 1988). Both calcium carbimide and disulfiram were tolerated without any major side effects by all patients. Of the 30 patients, 10 initially complained about fatigue during disulfiram treatment, and 3 patients attributed signs of impotence to taking disulfiram. Only 1 of the 30 patients insisted on cessation of intake. This patient was not ready to accept the OLITA concept and, therefore, left the program.

Of the total of eight relapses in OLITA I and II, three were detected solely by urine analysis. The other five relapses became evident when patients missed their OLITA appointments. An increasing social re-integration of OLITA patients is reflected by data on the occupational situation upon entering OLITA vs the present state: Of the 18 patients remaining in OLITA, the rate of employment, temporary or permanent, increased from 28% (5 individuals) to 72% (13 individuals). In contrast, none of the 12 dropouts improved his work situation (50% unemployed).

## Discussion

Since the beginning of OLITA, 30 male alcoholic patients have been observed, for a period of 6–26 months (mean  $43 \pm 30$  weeks). The success rate as measured by continuous abstinence is approximately 60%. Although only 30 patients have been included thus far, the unexpectedly high success rate despite an overall "negative selection" of patients with regard to duration and sequelae of alcoholism, number of detoxifications, previous failed treatments and degree of social detachment, makes it worthwhile to describe the OLITA concept at this point.

The approximate calculations of costs for this program make it an interesting project for those who have to finance treatment for alcoholism (Holder et al. 1991), e.g. for health and annuity insurance groups: For a 6-week inpatient therapy, followed by a 6-week outpatient period with one group session per week, the most conservative cost estimate amounts to a minimum of 20 000 DM per patient, whereas the total cost for the 2-year OLITA program will be less than 16 000 DM per patient.

Outpatient programs in general have long been recognized as being almost equally as effective as inpatient therapies in the treatment of alcoholism (McKay and Maisto 1993). Nevertheless, OLITA seems to be evolving as an unusually successful outpatient program for severely affected previously therapy-resistant chronic alcoholics. The multiphasic approach and the long duration of treatment may contribute substantially to its success. The initial high contact frequency (daily), thus far unique among alcoholism treatments, helps to overcome the "critical 12 weeks" following abstinence (Hunt et al. 1971). In contrast to long-term inpatient therapies with a temporarily protected environment and a sudden discharge, the OLITA concept aims at an immediate therapy-guarded and therapy-guided social re-integration. Patients struggle to stay sober in a relapse-promoting environment. The slow and gradual weaning-off therapy supports maturation of coping strategies and development of independence (McKay and Maisto 1993).

The control factors in OLITA also appear to play a role. The deficiency in maturity of alcoholic patients is temporarily substituted by control until an increased responsibility slowly reduces the need to be controlled. The controlled intake of aldehyde dehydrogenase inhibitors as deterrents to drinking has long been found to be successful (Gerrein et al. 1973; Fuller and Roth 1979; Azrin et al.

1982), yielding abstinence rates of 20–25%, even upon application of pharmacologically inactive doses (Fuller and Roth 1979). Deterrent medication has been used as one “ingredient” for OLITA. The negative expectation towards the use of alcohol as achieved by this medication strengthens the efficiency of the OLITA concept. Another important control factor conceptualized in the OLITA program is the regular urine analysis for alcohol and, potentially, for other drugs of abuse. This surveillance can serve, as a behavioural control and as an information procedure. Although unusual in alcoholism treatment, it is known to be effective as an adjunct to outpatient psychotherapy for drug abusers (Milby et al. 1980).

In summary, OLITA is a hopeful approach towards a successful and economic treatment of severely affected therapy-resistant chronic alcoholics. The slow tapering of the initially high contact frequency in a long-term therapeutic attachment supports maturation of personality and social re-integration, which both appear to be the most powerful prophylactic means for preventing relapse.

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## References

- American Psychiatric Association (1994) Diagnostic and statistical manual of mental disorders, 4th edn. American Psychiatric Press, Washington, DC
- Armor DJ, Polish JM, Stambul HB (1976) Alcoholism and treatment. Prepared for the US National Institute on Alcohol Abuse and Alcoholism. Rand Corporation, Santa Monica, Calif
- Azrin NH, Sisson RW, Meyers R, Godley M (1982) Alcoholism treatment by disulfiram and community reinforcement therapy. *J Behav Ther Exp Psychiatry* 13: 105–112
- Banys P (1988) The clinical use of disulfiram (Antabuse): a review. *J Psychoactive Drugs* 20: 243–261
- Costello RM (1975) Alcoholism treatment and evaluation: in search of methods. *Int J Addict* 10: 251–275
- Emrick CD (1974) A review of psychologically oriented treatment of alcoholism. I. The use and interrelationship of outcome criteria and drinking behavior following treatment. *Q J Stud Alcohol* 35: 88–98
- Fuller RK, Roth HP (1979) Disulfiram for the treatment of alcoholism. *Ann Intern Med* 90: 901–904
- Gerrein JR, Rosenberg CM, Manohar V (1973) Disulfiram maintenance in outpatient treatment of alcoholism. *Arch Gen Psychiatry* 28: 798–802
- Holder HD, Longabaugh R, Miller WR, Rubonis AV (1991) The cost effectiveness of treatment for alcohol problems: a first approximation. *J Stud Alcohol* 52: 517–540
- Hunt WA, Barnett LW, Branch LG (1971) Relapse rates in addiction programs. *J Clin Psychol* 27: 455–456
- Küfner H, Feuerlein W (1989) In-patient treatment for alcoholism. A multi-centre evaluation study. Springer, Berlin Heidelberg New York
- Levy MS, Livingstone BL, Collins DM (1967) A clinical comparison of disulfiram and calcium carbimide. *Am J Psychiatry* 23: 1018–1022
- McKay JR, Maisto SA (1993) An overview and critique of advances in the treatment of alcohol use disorders. In: Connors GJ (ed) *Innovations in alcoholism treatment: state-of-the-art reviews and their implications for clinical practice*. The Haworth Press, New York, pp 1–29
- McNichol R, Ewing JA, Fauman MD (1987) Disulfiram (Antabuse): a unique medical aid to sobriety. Charles C. Thomas, Springfield, Ill
- Milby JB, Clarke C, Toro C, Thornton S, Rickert D (1980) Effectiveness of urine surveillance as an adjunct to outpatient psychotherapy for drug abusers. *Int J Addict* 15: 993–1001
- Poikolainen K (1983) Survival methods in the evaluation of the outcome of alcoholism treatment. *Br J Addiction* 78: 403–407
- Polich JM, Armor DJ, Braiker HB (1980) The course of alcoholism: four years after treatment. Rand Corporation, Santa Monica, Calif
- Soyka M (1995) *Die Alkoholkrankheit – Diagnose und Therapie*. Chapman and Hall, Weinheim, Germany