Tobacco addiction and hypnosis: Performance of a 2 sessions hypnosis-based structured treatment in a clinical series

Eulalia Cardona and Moisés Martin

Main current evidence about health problems related with tobacco smoking and about smoking cessation methods, including hypnosis, are reviewed. Since the 1950's, research on smoking and smoking cessation has grown exponentially, and available empirical data support the cost-effectiveness of both medical and psychological interventions, even for brief physician advice to quit. However, the potential value of hypnosis in smoking cessation remains questioned. An individual, 2 sessions hypnosis based structured treatment is described. Data has been collected from patients of the private practice of the first author. 48 out of 51 treated patients were contacted by a telephonic follow-up call after a variable fw-up period (mean 2.7y post-treatment). At follow-up, 66.6% patients reported abstinence. Only one dimension, overall comorbidity level, was significantly correlated to outcome. Motivation to quit could have some predictive value, but it did not reach statistical signification. Results compare well with others in the hypnosis and smoking cessation literature. High quality controlled research are needed in order to have this or other hypnotic treatments widely accepted as valid and scientific smoking cessation interventions.

1. Introduction

Lack of historical background usually lends many people to consider smoking promotion as a question of economic interests and smoking cessation as another kind of Puritan fashion. However, just like tobacco was rejected in a first moment as a devil's thing by Spanish Inquisition (Llanos, 1985), it also was risingly accepted until the XX century just because there was no medical negative reports about its use. The first ones appeared in the 1950's (Doll & HIll, 1952; Royal College of Physicians, 1962).

Since then, tobacco has been recognized as the first avoidable cause of inability, illness, and death in developed countries (Peto et al., 1992; Fiore et al. 2000). Directly attributable to smoking are about 20% of deaths by coronary disease, 80% of deaths by

Chronic Obstructive Pulmonary Disease, 30% of deaths by all cancers and specifically 90% of deaths by lung cancer, one of the most aggressive types of cancer. Increased chances of having health problems among secondhand smokers (frequently children or relatives of the smoker) have been established (C.D.C., 1996).

Along with categorization of tabacco smoking as a harmful practice came the recognition, that nicotine present in tobacco fulfilled criteria to define addictive drugs, as compulsive use, psychoactive effects and definite withdrawal symptoms. Consequently, its use is now classified as an addiction (W.H.O., 1975; American Psychiatric Association, 1994). Also, it is also being considered as a chronic condition (Fiore et al., 2000).

Many smokers are unwilling to quit and many clinicians are reluctant to advise smoking patients to quit or prescribe them effective treatments (i.e. pharmacotherapy). These attitudes may be grounded in a number of beliefs (as considering smoking as nothing but a life-style choice up to the freedom of the individual), or in a lack of training, knowledge and/or availability of treatments (Fiore et al., 2000).

Even accepting this fact, epidemiologic data suggest that 55% of smokers in Spain and more than 80% in U.S.A. would like to quit (C.I.S., 1988; USDHEW, 1990). Data for other countries may change, but anyway a large number of smokers are willing to quit and statistics show that most of them fail if they try on their own. So they, their relatives and the society in general would benefit from any effective treatment that may help them to succeed in their effort.

Smoking cessation interventions may be classified as 'minimal' (including self-help materials, community programs and physician advice) or 'intensive' (basically pharmacotherapy and intensive psychosocial interventions), and its effectiveness can be compared with that of quitting on their own, control or placebo groups. An orientative summary of relevant findings about these methods follows.

Quitting on their own and Placebo groups.

A considerable proportion of smokers want to quit on their own. In U.S. more than 70% of smokers have made at least one attempt to quit (CDC, 1997). While both clinicians and smokers may regard this method of quitting as the best one, statistics show that only about a 5% of those who try to quit on their own remain abstinent 1 year later (A.P.A., 1994). On the other hand, meta-analysis show that placebo-groups can achieve about a 10% abstinence rate.

Minimal interventions: physician advice to quit, self-help materials and community interventions

Minimal interventions achieve modest rates of abstinence, but they generally have been found to be cost-effective because they can reach a large proportion of the general population (i.e. attended in primary care). Physician´s advice to quit achieves on average a 6% rate of abstinence at fw-up, while self-help materials (i.e. booklets) and community interventions (i.e. television programs) were found to reach 17% (Garrido

et al., 1995). It has been estimated that general practicioners can interview up to 70% of smokers in a year (Fiore et al.,2000), so even a 6% rate of success is helpful. It should be noted that the effectiveness of a physician's advice to quit can increase noticeably among acute cardiovascular and chronic respiratory patients.

Pharmacotherapy

In their meta-analytic and up-to-date review and clinical guideline, Fiore et al. (2000) identify five first-line medications (bupropion SR, nicotine gum, nicotine inhaler, nicotine nasal spray and nicotine patch) and two second-line medications (clonidine and nortriptyline) as useful for smoking cessation. Most of them are NRT, although Bupropion SR is the first non-nicotine medication (antidepressant) shown to be effective for smoking cessation and approved by the U.S. Food and Drug Administration (FDA) for that use.

Nicotine gum achieved an average 35% of effectiveness at 1 year follow-up over 33 studies (Cepeda-Benito, 1993) , while Silagy et al. (1994), reviewing 39 reports, found an overall rate of 18.2% at 1 year follow-up. For nicotine patches, Fiore et al. (1994) found an overall 21.8% abstinence rate at 6 mo fw-up and Silagy et al. (1994) found a 20.5%. Garrido et al. (1995) found an average effectiveness of 14% with pharmacotherapy (min. 6 months of follow-up). Silagy et al (1999) concluded that "All of the commercially available forms of NRT (nicotine gum, transdermal patch, and in some countries, the nicotine nasal spray, nicotine inhaler and nicotine sublingual tablets) are effective as part of a strategy to promote smoking cessation. They increase quit rates approximately 1.5 to 2 fold regardless of setting". Bupropion SR, a non-nicotine medication, has also be found to be effective for smoking cessation. A recent meta-analytical review estimated abstinence rate for about 30.5% for Bupropion (Fiore et al, 2000).

While NRT typically are intended to be used for 12 weeks, there is evidence that 8 weeks may suffice (Fiore et al., 1994). As we will see, however, this is still longer than many behavioral and most hypnotic interventions.

Interestingly, "in most pharmacotherapy studies both experimental and control subjects typically received substantial counseling" (Fiore et al., 2000), so it is not easy to assess if this effectiveness is due exclusively to pharmacotherapy by itself.

Intensive Psychosocial Interventions

Intensive Psychosocial interventions encompass any specific behavioral techniques for smoking cessation, as cigarette fading or aversive techniques (rapid smoking, saciation, smoke holding), as well as more generic cognitive-behavioral interventions (as coping skills, stress management, negative affect intervention or contingency contracts), counselling and social support, both in individual or group format.

First trials in 60 and 70s decades with specific behavioral techniques as time-limited rapid smoking were optimistic, as they quickly achieved rates of abstinence in the 80-100% range at EOT. However, little attention was paid to relapse prevention and therefore rate of abstinence at fw-up was disappointing. Since then, researchers have

learned that sustained rates of abstinence are to be achieved by means of multimodal interventions that make use of several techniques empirically supported and including relapse prevention interventions.

Behavioral interventions used alone were found to achieve an average rate of abstinence of 24% in a meta-analysis (Garrido et al., 1995). Even being used alone, the average rate for this technique is one of the highest of all methods reviewed in this meta-analytic report. A typical rapid smoking intervention may include several daily sessions delivered in 1-2 weeks.

Multimodal or multicomponent approaches

Multimodal or multicomponent interventions encompass any intervention that makes use of two or more empirically supported interventions for smoking cessation. In theory, multimodal interventions can include any mix of pharmacological and/or psychosocial interventions. While combinations of NRT are not much recommended (Fiore et al. 2000), combinations of NRT and Bupropion, of NRT and intensive counselling-behavioral interventions and cognitive-behavioral multicomponent programs have been carried out with success.

Fiore et al. (2000), speaking about mixed medical-counseling multimodal interventions state that "As with other chronic diseases, the most effective treatment of tobacco dependence requires the use of multiple modalities. Pharmacotherapy is a vital element of a multicomponent approach". Becoña (1990, 1996), considers behavioral multicomponent programs as the most effective smoking cessation interventions, and the preferred smoking cessation treatment option. However, despite their effectiveness, a major obstacle for psychological approaches from the public health point of view is, according to Fiore et al. (1994), that most smokers referred to undergo an intensive counselling intervention may be unwilling to comply (Lichtenstein & Hollis, 1992).

Meta-analytic reviews support both individual and group behavioral programs (Lancaster & Stead, 2000; Fiore et al., 2000, Stead & Lancaster, 2000). Averaged effectiveness of multicomponent interventions (whatever type) was found to be 28% at 6 months fw-up or more (Garrido, 1995). In this meta-analysis, multicomponent, hypnotic and psychological interventions achieved the highest rates of abstinence of all the methods reviewed.

Behavioral multicomponent interventions reviewed in Vázquez & Becoña (1996) range beween 6-13 sessions along 1-13 weeks, and are representative of this type of interventions.

Hypnosis

First report of hypnosis in smoking cessation dates from 1847 and used aversive techniques. Since then, there have been many more reports, most of them case studies, anecdotical, or lacking of adequate methodological rigor. Interestingly, hypnotic interventions have the widest range of abstinence rates at follow-up reported in the literature, from as low as 0% to as much as 100% (Katz, 1980). Incidentally, this also means

that the best hypnotic treatments achieve the highest rates of abstinence at follow-up of all methods (i.e., Crasilneck, 1990). Moreover, length of treatment tends to be much shorter than with any other intervention usually ranging from 1 session to 2-3 weeks (see Lynn et al., 1993) as compared with 2-12 weeks or more that are usual among pharmacotherapy and behavioral interventions.

This results notwithstanding, the effectiveness of hypnosis remains questioned. Dresler & Shiffman (2000) states that "hypnosis (...) and other interventions [like acupuncture or anxiolitics] have not been demonstrated to reliably increase successful smoking cessation rates." Also, a meta-analysis by the Cochrane collaborative group concludes: "We have not shown that hypnotherapy has a greater effect on six month quit rates than other interventions or no treatment. The effects of hypnotherapy on smoking cessation claimed by uncontrolled studies were not confirmed by analysis of randomised controlled trials" (Abbot et al., 2000).

Other reviewers, while accepting that hypnotic interventions can sometimes have an effect, have not found it to be superior to other, non-hypnotic interventions. Among them, Wadden & Anderton (1982) state that "hypnosis does not offer a unique strategy for smoking cessation. (...) Controlled investigations revealed that (...) contradictory findings were obtained for smoking cessation therapies". In their reviewing of 24 empirical studies on hypnosis and smoking cessation reported between 1980 and 1992, Lynn et al. (1993) also concluded that available evidence was consistent with Hunt & Bespalec (1974) statement that hypnotic and non-hypnotic treatments produced equivalent results. Finally, one of the most dissapointing results was reported in the mentioned meta-analysis by Garrido et als. (1995), where hypnosis was found to achieve one of the highest average abstinence rate among all methods ... but it didn't reach statistical significance.

Undoubtedly, definitive empirical support for superiority or even just effectiveness of hypnosis in smoking cessation is lacking. However, we should bear in mind some considerations. (1) "An absence of studies [that meet meta-analysis criteria] should not be confused with proven lack of efficacy" (Fiore et al., 2000). Lack of evidence only should lead to no-opinion. (2) "Even when there were enough studies to perform a meta-analysis, a nonsignificant result does not prove inefficacy. Rather, nonsignificance merely indicates that efficacy was not demonstrated given the data available" (op.cit). (3) While most of hypnotic interventions evaluation lack methodological quality, still they achieve the highest rates of abstinence at long-term follow-ups with the shortest interventions, and this is quite relevant, and more consistent than (4) rates of abstinence as low as 4% or even 0%, which for the experienced hypnotherapist in smoking cessation are hard to understand.

To this, we could add that (5) while results generally in fields other than smoking cessation do not necessarily apply, reviews of hypnosis as an adjunct to psychotherapy are encouraging. Schoenberger (2000) concludes that "overall, studies demonstrate a substantial benefit from the addition of hypnosis", and in a meta-analysis of 18 studies

comparing cognitive-behavioral therapy with the same treatment with hypnosis, Kirsch (1993) found a statistically significative average effect size of 0.87. This means that "the average client receiving cognitive-behavioral hypnotherapy is better off at the end of it than more than 80% of the clients who receive the same treatment in a nonhypnotic context." (Kirsch, 1993). And (6) the meta-analytic comparision carried out by Garrido et als. (1995), as well as that of Chockalingam & Smith (1992) found that hypnosis, along with multicomponent and psychological (behavioral) interventions, achieved the highest averaged rates of abstinence of all methods. The problem with hypnosis reports in the meta-analysis reviews is that they are heterogeneous, and there are a low number of well-designed studies that meet the inclusion criteria, and consequently, only figures for multimodal and psychological interventions reached statistical signifficance.

In summary, both the authors' experience and the reviewing of the literature about hypnosis in smoking cessation make them believe that hypnosis is a valuable tool in smoking cessation as well as in other fields of application, while a number of well-designed, randomized clinical trials are necessary. Individualizing treatment should be compatible with the protocol design. Protocols should be based on former trials that have reported high rates of abstinence. Ideally, the same clinician that has achieved succesful rates should train and secure similar performance in other hypnotherapists. Finally, the hypnotherapist should be rated in adherence to hypnosis and protocol criteria. This and other similar measures could eliminate what are (in our view) spuriously low results and contribute to support hypnosis as a valid treatment for smoking cessation.

2. Method

We have tested an individual, 2 sessions hypnosis based multicomponent structured treatment. It is quite standarized, but many elements are tailored to the individual patient. A distinctive characteristic: it is quite incisive. Usually, only two sessions are delivered, and they have to be given in a maximum of 48 hours. The first session is more aversive (metaphorical suggestions). This is very effective short-term, and usually the cigarettes smoked go down to nearly zero after the first session. Then, the second session fixes this result giving emphasis to positive, healthy and assertive feelings. The other key element is the use of self-hypnosis daily for 2 weeks. That is a period of maximum risk of relapse, along with post-hypnotic cues to self-control anxiety. These two elements reduce the necessity of further sessions and give autonomy to the patient. A summary description of the therapy follows, while we consider that intensive specific training would be necessary in order to replicate it.

First Session. It lasts about two hours, begins with case history and then information about smoking and hypnosis is given before the hypnotic induction. Once we have the patient in trance, motivation to quit is checked by ideomotor signaling. Any potential resistance is worked out. Then we induce aversive suggestions (metaphorical and

indirect). We use both physiological aversion and emotional aversion, checking for non verbal signs. These aversives are tailored from the anamnesis to make them most relevant for the individual patient. For instance, with a patient we can suggest that tobacco smells and tastes bad, and that the patient feels like imprisionel, and with the next patient we suggest coughing and hospitalization. Positive suggestions are embedded between aversive suggestions ("breathing clean air, freedom..."). The following step is regression to initial experiences of smoking, to clean them up, and then there is a visualization of himself or herself in the future, free of tobacco (frequently, this visualization includes children, or relatives).

Once the patient is re-oriented, the session ends with a trial of hetero-induced self-hypnosis and post-hypnotic cues for anxiety control, and some behavioral tasks. The day after the first session, and before the second one, usually there is a telephone call to check evolution.

Second Session. Triggers or difficult situations are identified. Then, there is a self-hypnotic induction. Progress is reinforced, and then specific risky situations are worked out. When this is achieved, then suggestions and visualizations for emotional indifference towards tobacco are offered. Hypnosis is ended working on relapse prevention, with the patients visualizing themselves free of tobacco in the specific risky situations identified and in general (i.e., again with their children and family). The patient is reoriented, and then there is a behavioral contract to use self-hypnosis with daily mental programming of next day, free of tobacco. This is continued for a minimum of 2 weeks, and telephone contact for follow-up.

Third or further sessions are used only if it is judged necessary.

3. Results

Clinical series

This therapy has been tested on a clinical series of smokers that initially was constituted by 56 patients from the private practice of first author (E.Cardona), treated between 1994 and 1999. 35 (62.5%) were women. On average (Mdn), our smokers were 40 years-old, began to smoke at age 16 and they had been smoking for 24 years. 39 (69.6%) had some physical complaint related with tobacco smoking; 25 (44.6%) had pulmonary or hearth problems. 37 (67%) were 'heavy-smokers' (over 30 cigarettes per day). 25 (44.6%) had tried at least one formal attempt to quit, without success. In general, they were quite well motivated to quit (mean = 7.7 on a 10 point scale).

Adherence

In our study, 2 patients were explicitly identified as having another major problem and were treated but discarded from the smokers' series. 3 out of the remaining 54 initial patients accepted for smoking cessation treatment did not complete treatment. Consequently, adherence rate is considered to be 94.4% (51 out of 54).

Follow-up

In our study, we excluded patients treated in the previous 12 months. Telephon calls were all done on Jan-Feb 2000, so the fw-up period is variable, ranging from 1.1 y and 6 y, with an average fw-up period of 2.7 y. Abstinence status was asked from the patient by the therapist, so it was a self-reported measure. At follow-up, 48 out of the 51 patients who completed treatment (94.1%) were contacted.

Abstinence rates

We considered only abstinent versus non-abstinent outcome. At the end of treatment (EOT), 44 out of 54 (81.5%) were abstinent. After follow-up, 32 out of 48 (66.6%) patients who completed treatment and were contacted, reported continued abstinence (two thirds of patients had retained abstinence for more than 2 years and a half.). While non-contacted are frequently counted as smokers, we can't see the rationale for this procedure. A non-contacted patient, by definition, is somebody about whom we cannot state anything about current smoking status. A similar reasoning can be made about those who did not complete the treatment. However, rate of abstinence at fw-up would be 62.7% if we consider non-contacted as smokers, or 59.3% if we add those who did not complete the treatment.

Efficiency

Our patients required an average of 2.4 sessions. As patients that underwent only 1 session were considered as non-completers, minimum number of sessions was 2. In one case, there were delivered up to 7 sessions. However, 42 out of 51 completers (82.3%) required just 2 sessions.

Predictors

All subsequent abstinence rates refer to follow-up. Gender correlated with outcome at follow-up (phi=0.31; $p<0.03$). Abstinence rate among males are larger than among females (81% vs. 50%; see also discussion of comorbidity, later). Age at the beginning of treatment also had a correlation with abstinence at follow-up, abstinents being younger than those who relapsed (rbp= 0.24; $p<0.01$). Average number of years smoking before the treatment was equal between abstinents and non-abstinents (t-test n.s.).

'Heavy/Light' smoker status had no correlation with abstinence, but it did not reach significance level (phi=0.23; $p=0.10$). However, average number of packs per day was significatively higher among those who remained abstinent than those who did not (1.8 packs vs 1.37; t-test=-2.65,df=48.94; $p<0.02$). Thus, results suggest a tendency to higher abstinence rate among heavy smokers. Finally, having had previous formal attempt(s) to quit was independent to outcome (chi^2 n.s.).

By large, the most important single predictor of outcome was what we called 'overall comorbidity level'. Clinician rated every patient in a 3-point scale as 'High', 'Medium' or 'Low' in comorbidity level. Inspection of results suggested a dicotomization of 'Lows+Medium' vs. 'Highs'. Correlation with abstinence rate was quite high and statistically significant (phi=0.66; $p<0.001$). Rate of abstinence decreases dramatically

among 'Highs' (7.7%) compared to that of 'Low+Medium' group (81.6%). In our series, there was also an association of gender with comorbidity, being it higher among females (phi=0.42; $p<0.01$).

Another variable that appeared as relevant was motivation to quit. Patients self-rated motivation to quit on a single ten-point scale (1=Minimum; 10=Máximum). Average motivation level for abstinents differed significantly from that of non-abstinents (8.40 vs 7.06; t-test=2.90;df=45;$p<0.1$). Dicotomizing in 1-8 vs 9-10, chi^2 is significative ($p<0.05$), while correlation is not (phi=0.28; $p<0.10$). Thus, results suggested a cut-point around 7.5 or 8.

Another variable potentially relevant was motivation to quit. Patients self-rated motivation to quit on a single ten-point sacale (1=Minimum;10=Maximum). Average motivation level for abstinents differed from that of non-abstinents (8.40 vs 7.06), but the difference did not reach statistical significance (t-test=2.90; df=45; n.s.). Dicotomizing in 1-8 vs 9-10, chi^2 is significant ($p<0.05$), but correlation is not (phi= 0.28; $p<0.10$).

4. Discussion

Our report presents a number of methodological flaws that are common to other reports in the literature. First, it lacks a control or placebo group and randomized assignation of patients. A potentially more serious weakness is that data were collected by only one therapist. Also, the use of self-reported measures are considered to over-estimate abstinence rates. Objective and bio-chemical test are preferable, at least among a sub-sample of the patients (Vázquez & Becoña, 1996).

However, Fiore et al. (2000) found that "studies with, and without, biochemical confirmation yield similar meta-analysis results", the only exception to this being the self-reported abstinence rates in pregnant women. Also, while only one of the therapists had collected reports systematically, the second author's experience with the protocol and those of other colleagues are comparable with results obtained by the first author. Finally, regarding control groups, Lynn et al. (1993) concluded that "No treatment control groups appear to be superfluous, in so far as in the absence of treatment, clients generally show no change in smoking behavior." Even assuming an averaged 5% rate of abstinence for control groups, the general idea of Lynn et al. (1993) holds true. On the whole, we find that flaws mentioned justify to be cautious, regarding findings as a preliminary evaluation that is necessary to replicate, but that these flaws do not invalidate the main results.

Despite the modest scope of the report, it has overcome some frequent errors found in reports of smoking cessation and hypnosis. The rate of non-completers is very acceptable (Bayot et al., 1995), as there is evidence those who complete the treatments achieve better abstinence rates than those who do not (Becoña, 1991), and because even a high effectiveness may be questioned if proportion of non-completers is high, which is not the case in our series. As has been noted, by the way, leaving the treatment

before completion surely is associated with the length, costs and perceived usefulness of the ongoing treatment.

It is usual to report abstinence rate at EOT, which in our study is high compared with those reported for nicotine patches (Fiore et al., 1994). However, abstinence rates of 70% or 80% at EOT are not rare among behavioral methods, but relapses usually cut them down to 50% or 30% at 1 year fw-up (Hunt & Bespalec, 1974;Vázquez & Becoña, 1996). Consequently, abstinence at EOT has little significance without reporting follow-up results. In our case, abstinence rate at fw-up also compares favorably with others in the literature. In fact, it is higher than typical pharmacotherapy and behavioral outcomes, and also is in the higher range of hypnotic interventions.

Another feature of our evaluation study is the long-term follow-up. Interestingly, long-term follow-up studies are typical only for cognitive-behavioral interventions (Vázquez y Becoña, 1996). Most pharmacotherapy reports are based on 6 months follow-up, allegedly because relapse curve in smoking cessation is relatively plain after 6 months (USDHHS, 1988, Fiore et al., 1994). However, other reviewers recommend that minimum follow-up should be 1 year (Lichtenstein & Glasgow, 1992).

In the literature about smoking cessation, little attention is paid to the time span required to achieve results. While healthcaring should never be converted into a race, it has to be accepted that, ceteris paribus, the shorter the intervention, the better. Incidentally, efficiency seems to be a characteristic advantage of hypnosis-based interventions. Individual interventions reported in Lynn et al. (1993) averaged 2.66 sessions. Thus, our results can be viewed as typical among hypnotic interventions, but much shorter than typical non-hypnotic ones.

Moreover, we have the definite impression that outcome is not necessarily improved by adding sessions, and can even be harmful. While this counters evidence-based recommendations of clinical guidelines (Fiore et al, 2000), we consider that a clean, brief 2 session intervention may be more effective than a slow, lengthy series of sessions and home-task for many weeks. At the same time, 1 session interventions like those described in hypnosis reports seem too short. While some of our patients have suceeded in quitting in only 1 session, usually it leaves us uncertain about results. Smoking is a complex multifaceted behavior, and having a second opportunity to address specific elements not covered in the first one is very convenient. Besides, the 24-48 h interval seems to be justified because most of the withdrawal symptoms from smoking are at a maximum at 24 hours (Kramer, 2000).

Concerning our use of aversive suggestions, we are aware that some may consider them as old-fashioned or potentially harmful, so we want to make clear here that we don't endorse the abuse of strong aversive suggestions as some stage hypnotists do. However, we do seek patient's face for confirmatory non verbal spontaneous responses of rejection to real tobacco smoke from a lighted cigarette, some coughing, but we never let them reach unnecessary extreme levels. Assuming there is only some discomfort, and useful as they are, the fashion question seems irrelevant to us. We agree

to treat patients with extreme care, but we should also be sure not to loose efficacy. In our experience, rejection to treatment is related to lack of results, not with the aversive suggestions. They seem to be a key element in achieving a fast first response that enhances expectations and results.

On the other hand, our findings about what we have called 'overall comorbidity level' are in agreement with conclusions of smoking cessation reviews about "psychiatric comorbidity". Fiore et al (2000) state that "as many as 30 percent of patients seeking smoking cessation services may have a history of depression, and 20 percent or more may have a history of alcohol abuse or dependence."

The same report points that "smoking cessation or nicotine withdrawal may exacerbate a patient's comorbid condition" and that both a history of psychiatric comorbidity and a high stress level linked to recent or anticipated stressful life circumstances or major life changes (as divorce, job change or marriage) are associated with lower abstinence rates (Anda et al, 1990; Glassman et al, 1990; Breslau et al, 1992;). Similar conclusions are outlined in Kramer (2000).

Note that our broad definition of 'comorbidity' covers both 'psychiatric comorbidity' and 'relational problems' and 'stressful life events', thus being in line with Marlatt´s model of relapse (Brownell, Marlatt et al, 1986). This intervening variable(s) may help to understand why bupropion SR or nortriptyline (antidepressants) are effective in smoking cessation (Fiore et al, 2000).

Recognizing the influence of comorbidity in smoking cessation treatment outcomes poses important questions about smoking treatments, both clinical and methodological. The clinical one is what should we do when a patient with severe pathology, or going through a stressful life event comes and asks for our help to quit smoking. Should we treat him/her as just a smoker? Fiore et al (2000) recommendation is to offer smoking cessation treatment to these patients regardless of their comorbidity. From a 'minimalist' point of view (even modest rates of abstinence can be cost-effective, quitting smoking is the main objective) this is quite unquestionable. However, from a clinician point of view, this answer can be unsatisfactory, leading to some options (combined pharmaco-psychotherapy, informed consent, multilevel Ericksonian psychotherapy...). It does not seem ethic or even practical to do an intervention on smoking if the clinician suspects or knows in advance that chances of success are compromised because of comorbid conditions, leaving those problems unworked. Currently we usually choose as informed consent approach to this question with these patients.

Whatever the decision may be, we find it advisable to systematically assess mental and physical disorders. This screening assesment should include specifically major depressive and other psychiatric disorders, anxiety/stress level, main stressful events and convivential/relational status (all of them expected to correlate with poor outcome) and coronary and pulmonar illness (associated with better outcomes, at least for medical advice).

On the other hand, relationship of motivation to quit with outcome has been consi-

dered in the literature. For example, Wadden & Anderton (1982) states that "Once an individual has decided to participate in a cessation program, motivation to quit smoking (rather than susceptibility) appears to be the best predictor of success". While considering it "the best" predictor is uncertain, indeed Fiore et al (2000) do include motivation among the variables associated with higher abstinence rates. We did not find a consistent relationship between motivation and abstinence. Perhaps the nature of a short hypnotic intervention makes initial motivation to quit less relevant than in other treatments, or it is enhanced. However, in our own clinical work we continue asking for motivation level and probing if responses are below 7-8.

We have no systematic data concerning other important variables as nicotine dependence, self-efficacy, weight issues, and social influences (Becoña et al, 1989; Fagerström & Schneider, 1989; Fiore et al, 2000), and they should be addressed in future research.

A question that concerns us very much is replicability of interventions by other hypnotherapists, something that we consider primarily a problem of training. Specific training in counseling interventions simpler than hypnotic ones has been found to improve outcomes (Lancaster et al 1999; Fiore et al., 2000). Consequently, we consider it difficult to reproduce the results of any hypnotherapist(s) based solely on the own training in hypnosis (even if it is fine) and a careful reading of a therapy description. Specific training and even ratings of adherence of different hypnotherapists to the therapy are necessary, and these are nothing but customary procedures in medical multi-centric studies which involve several clinicians.

In summary, given the current methodological standards, not a single assesment of hypnotic-based smoking cessation treatments, however high its rate of abstinence at follow-up may be, can change the results of current meta-analysis and have hypnosis accepted as an empirically supported smoking cessation method (Abbot et al, 2000; Fiore et al., 2000). Even if hypnosis is in fact as effective as it seems to be, in order to be accepted by meta-analysis, a wide collaborative effort in the field of hypnotherapists is needed. Nonetheless, the effort for any clinician to validate his/her own clinical work is worthwhile and advisable. In our case, it has corroborated our subjective impressions of effectiveness of the procedure, has reassured us about the maintenance of treatment gains, has suggested specific ways for improving the therapy (i.e. taking in account comorbidity) and warrants future research on it.

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XXIInd Congress of the Collegium Internationale Neuro-Psychopharmacologicum

Utilising traditional clinical hypnosis in the dramatic healing of a student suffering from night-blindness

Pieter W. Nel

A twenty-year-old student suffering from night-blindness was referred for hypnotherapy. No physical cause could be established for her problem. The time for treatment was limited and it was decided to revert to direct suggestions. It was established that she had a good talent for hypnosis, therefore, the power of the subconscious mind was demonstrated to her whilst she was in the condition of trance. It was suggested that, in similar ways, the subconscious mind controls all the muscles in the human body, also the small muscles controlling the opening and closing of the retina. Suggestions regarding light and darkness were given and it was proven to her by using a mirror that the retina opens wider when it becomes dark and closes when it becomes light. It was suggested that, in a similar way, the retina would respond in normal life.

Only three sessions were scheduled in which to achieve the desired effect. No more sessions could be arranged, due to the fact that she had to go back to the university, which is more than a thousand kilometres away from my place of practice. She was requested to call to report results. Once back at the university, she called me and informed me very enthusiastically that she was enjoying a full student life. What pleased her most, was the fact that she could see stars at night, and even drive a motor vehicle at night-time. A follow-up after one year revealed that she was still living a normal life without suffering from night-blindness.

History

A farmer from Lichtenburg, South Africa, made an appointment for hypnotic assistance in becoming a non-smoker. Whilst waiting in the waiting rooms, he read a pamphlet from the South African Society of Clinical Hypnosis (SASCH) regarding clinical hypnosis and its applications. During the subsequent interview, he requested more information regarding the applications and utilisation of hypnosis. He was informed about the utilisation of clinical hypnosis for various problems, *inter alia* the use of hypnosis by one of the SASCH members to improve his vision for his annual medical examination as a pilot.