

Use of aromatherapy (with or without hypnosis) in the treatment of intractable epilepsy—a two-year follow-up study

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We have been trying the effect of aromatherapy (with or without hypnosis) in patients with intractable epilepsy who ask for it. This is a report of the first 100 patients to try the treatment, followed up for at least two years after the treatment ended.

It is important to remember that this was a treatment for people who had asked for it and for whom time and a therapist was available. It was not a controlled trial but was carried out when we could and at a time when we were experimenting with the best way of using it. Results must therefore be treated with caution and with due regard to other therapeutic factors that may be implicated in the results, both good and bad. We assume that the result (with over a third of the patients using aromatherapy with or without hypnosis becoming seizure free for at least a year) as being the best that could be achieved and likely to be less in a properly controlled trial. Of the three treatments tried (aromatherapy on its own, aromatherapy plus hypnosis and hypnosis without aromatherapy), aromatherapy plus hypnosis seems to have had the best and most lasting effect (a third of patients still seizure free at two years), but was the most labour intensive and needed medical therapist input. Aromatherapy itself might be best reserved as a short-term treatment for people going through a bad time with their seizures. A fuller and more lasting effect may be obtained with aromatherapy plus hypnosis, but this needs a patient who is prepared to put much time and personal effort into the treatment.

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INTRODUCTION

Aromatherapy is an alternative or complementary therapy. In the United Kingdom, it is used by people trained in the technique who are not usually qualified in anything else and is a massage therapy with essential oils, mainly used as an alternative or complementary treatment for stress-related symptoms^{1,2}. It is however being increasingly used as a complementary therapy in certain medical conditions, particularly cancer and in old age units, mainly by nurses. In other European countries, it is more widely used by therapists who have a medical qualification^{1,2} and oils are often used neat and taken internally (or used rectally or vaginally).

Aromatic oils used in aromatherapy are usually diluted in a bland oil for external massage. Different oils are said to have different properties. Used as part

of a massage, the oil in question, being aromatic, is absorbed through the skin and elements of it rapidly travel to internal organs (because of a first pass effect), particularly the brain: some absorption is also likely through the olfactory system as the patient can also smell the oil, which means brain entry. Different oils have different chemical constituents (although there is much overlap) and are said to have different uses and properties. It is important, if consistency is needed in effect, to endeavour to use an oil derived from the same country and source: the same oil but obtained from different countries or sites may vary widely in its constituents but even oils of different years, but the same site, may be different in what they contain³. Most oils in therapeutic use are unlikely to be harmful, used in small quantities diluted in a carrier oil for massage³, but some oils are better avoided by people with epilepsy if they contain much camphor,

which is convulsant^{3,4}. Most aromatherapists use a mixture of aromatic oils in small quantities in massage, although we have always used a single oil well diluted, different patients choosing different oils because the particular odour of the oil is liked by the individual. For us the aroma is important and we try to keep it as constant as possible.

We can only describe smell, the most primitive of the senses, in a general way (for example, like or unlike something else) as smell reception and interpretation is confined to more primitive brain regions⁵, which are however often the seat of epilepsy⁶. Smell in the human, unlike in animals, is relatively unimportant. It is however perhaps because of its primitive 'old brain' nature, easily conditioned: a conditioning difficult to remove once established (and established sometimes with 'one trial learning')⁷. Such learning is best conditioned when associated with an emotional event or experience^{8,9}. In humankind, women are better at this kind of memory reinforcement than men and have more olfactory experiences⁸.

Various countermeasures have been interposed between warning of an oncoming seizure and its actual arrival since earliest times, although smell has been little used (despite the presence and acknowledgement of olfactory auras). The only common olfactory stimulus used in epilepsy was the unpleasant practice of using burning hartshorn under the nose to stop a seizure: a practice that persisted for hundreds of years¹⁰, although it was also used for non-epileptic seizures as well.

Efron in 1957¹¹ showed that an aroma (of jasmine) could be used as a countermeasure to prevent an oncoming seizure: eventually (in what was a rather unnecessarily complicated regime) the memory of the smell of jasmine (very distinctive) was enough to stop the seizure: similar as we shall see, to the experience of our patients. Although only a single case study, the method promised much but was not used extensively until we tried it.

Some years ago now a temporary team member was training formally in aromatherapy to obtain a professional qualification and asked if she could experiment with the technique in people with epilepsy. After some thought and discussion agreement was reached and a pilot study was carried out with 10 patients (Table 1).

Only cheaper oils were used (chosen by the patient) and it was stipulated that a single oil would be used (this stipulation arose out of a desire to see if different oils had different effects, but it is one that we have serendipitously stuck to since: we can now afford the expensive oils like jasmine). She was also asked to train two team members in the technique. Ten volunteers with epilepsy had two full body massages with their chosen oil, one month apart: seizure frequency was measured for the month before the massage, the month after the massage and six months later (Table 1). All patients had proven epilepsy, mostly complex partial seizures with secondarily generalised tonic-clonic attacks.

The results of this pilot study were encouraging, although effects were transient in all but one patient. But there were also problems. What was the beneficial result due to? Why did it wear off? Was it due to a pharmacological effect of the oil(s)? Was it due to a (transient) decrease in arousal (reduction in stress is known to reduce seizures)¹²? Placebo and general treatment effects were probably important: could the aroma of the oil also have been important?

There are problems with using aromatherapy in a clinical setting, particularly providing a quiet setting for an hour of uninterrupted full body massage. Could we simplify the technique so that more patients could use it? Could we get the beneficial effect to be maintained for longer than a month? Efron's 1957 paper¹¹ gave us the idea of trying to use the aroma of the oil as a countermeasure against an oncoming seizure, so we tried in various ways to develop a conditioned response, which, since it was olfactory, might be long-lasting. Over the next 10 years we tried various approaches.

It must be emphasised that this was not done in a systematic or blinded way: but more as time, personnel, funds and opportunity permitted. We tried to accommodate those patients who requested trying it (unless we thought there was a good reason not to or that a modest change in their anticonvulsant regimen would be sufficient) and we sometimes suggested it to patients in whom we thought it might be helpful, if facilities were available. All patients reported in this study were shown clinically to have epilepsy: the diagnosis was not in doubt.

Table 1: First experiment in using aromatherapy in 10 patients with partial onset epilepsy.

	Month before treatment	During treatment month	Month after treatment	Six months after treatment
Mean seizure frequency	7 (3–12)	2 (0–27)	3 (0–18)	6 (0–13)
Oils chosen		Ylang Ylang (6), rosemary (1) ^a	Lavender (1), rose geranium (1)	Camomile (1)

^a Seizure increase.

Table 2: Methods used.

A. Hypnosis only	B. Massage only	C. Massage plus hypnosis
1. Patients taught arm elevation method of auto hypnosis	1. Patients choose oil from variety offered and are given a small bottle, from which a drop is inhaled (from the pillow) three times a week on going to bed	1. Mixture of A and B. Hypnosis carried out as in A followed when technique established by (see column C, point 2)
2. When they could switch into hypnotic state quickly invited to smell chosen oil	2. Six, usually two weekly, full body massages are carried out with the chosen oil	2. Six, usually two weekly, full body massage with chosen oil
3. Reinforced post-hypnotic suggestion that they will instantly relax when oil smelt. Several repeat treatments	3. Patient is encouraged to associate the smell of the oil with being relaxed	3. Patient has further autohypnosis to reinforce the post-hypnotic suggestion that will instantly relax when smelt oil
4. Practice with oil smelling only without hypnosis	4. Practice oil smelling to relax	4. Practice with oil as in A
5. Encouraged to smell oil if seizure threatened or likely	5. Encouraged to smell oil if seizure threatened or likely	5. Encouraged to smell oil if seizure threatened or likely
6. Continued practice with oil lowering arousal whether seizure threatens or not	6. Continued practice with oil lowering arousal whether seizure threatens or not	6. Continued practice with oil lowering arousal whether seizure threatens or not
7. Successful patients cease to carry oil and rely on smell memory, or bath with oil from time to time	7. Successful patients cease to carry oil and rely on smell memory	7. Successful patients cease to carry oil and rely on smell memory

Three methods were tried (Table 2). Some patients had a series of aromatherapy massages only; some had aromatherapy massages plus a hypnotic technique aimed at reinforcing the conditioning of the particular aroma the patient was using; some did not have massages but used the hypnotic technique only. The method used was not randomly allocated but depended on whether a therapist was available and whether the patient was prepared to accept massage as part of the treatment (not all are since it implies bodily exposure to another individual). Apart from a few patients (treated by another medically qualified staff member), all the hypnosis was carried out by myself and was standard: induction was by the hand relaxation method (using, when possible, the contralateral hand to the epilepsy focus in the brain) to induce a mental state of light hypnosis which was then followed by the post-hypnotic suggestion that the smell of the oil would induce relaxation: the more usual method of hypnotic induction (eye fixation) was avoided because some people with epilepsy have, due to drug side effects, difficulty in keeping their eyes still. Awakening out of the (mild) hypnotic trance was done by slowly counting backwards from five, to avoid sudden awakening (death in a seizure due to rapid awakening from a hypnotic trance has been reported—S. Brown, personal communication).

Massages were all standard whole body aromatherapy massages using the chosen oil (diluted appropriately in a standard carrier oil). Patients chose their oil (as did the hypnosis only group) by gently smelling various oils and choosing one that they liked: since smelling an oil from a bottle is different from the smell experience of being massaged with it, patients could change their choice if necessary (and some did; Table 5). It is possible that the choice our patients made (particularly those with olfactory auras) may not be the same as would be made by people who do not have epilepsy: all patients chose an oil reputed to lower arousal. The number of massages that patients had varied due to factors, such as the success of the treatment, the availability of the therapist and the distance the patient lived from the clinic. It is important to remember that we are reporting results over a 10-year period, performed by 10 different therapists. If there was no obvious change after six treatments (usually a three-month period) the treatment was abandoned.

RESULTS

The results of the initial 10 patients are presented in Table 1 as previously described. Table 2 describes the three methods used in the main study, Table 3 shows

Table 3: First 100 patients followed for a year after treatment.

	Hypnosis only (%) (<i>n</i> = 25, male 7)	Massage only (%) (<i>n</i> = 46 ^a , male 4)	Massage plus hypnosis (<i>n</i> = 29, male 5)
Seizure free	12 (male 0)	35 (male 2)	38 (male 2)
At least 50% reduction	36	30	31
No or transient effect only	48	31	25
Worse	4	4	6

^a Many of this group spontaneously learnt to use the aroma as a countermeasure.

Table 4: Number of patients seizure free at two years who were seizure free at one year.

	Hypnosis only	Massage only	Massage plus hypnosis
Seizure free at one year	3	16	11
Seizure free at two years	3	9	10
Withdrawn from medication	1 (seizure free)	4 (seizure free)	5 (seizure free)

the results of the three groups, one year after the treatment ended; Table 4 shows the results at two years after the treatment ended in those patients who were seizure free at one year. Table 5 shows the chosen oils (remembering that early patients had a limited choice of less expensive oils and choice changes could be made after the treatment started).

These results show that just over one third of patients who used the techniques of aromatherapy and aromatherapy plus hypnosis were seizure free after one year: some were still seizure free two years after ending treatment, although some, particularly in the aromatherapy only group, had relapsed. One thing we have not solved is whether treatment of a supportive nature (like maintenance, occasional, massages) are needed or not. Most of the patients who became seizure free adapted what they had learnt into their own method of aborting seizures and ceased to carry oil with them but just used the memory of the smell to abort the seizure. Almost all those who remained seizure free after two years did not have even a warning of a seizure although several spontaneously reported that they occasionally, without warning, smelt, or had a memory of smelling, their oil. This suggests that in these people the process had become automatic and did not require thought to activate it. We assume these patients have developed a 'smell memory'.

Although the first group merely had massages, many of them (including all that remained seizure free), spontaneously associated the smell of the oil with relaxing, although not formally taught to do so. The group that used hypnotism, but not massage, with a chosen oil were less successful initially in obtaining seizure freedom, although those who did achieve seizure freedom at one year still had it at two years (Table 4). The most successful and long-lasting treatment appears to be the combination of aromatherapy and hypnosis, although the two-year results (Table 4) suggest this may have been contaminated by therapist

effect, since only two therapists carried out hypnosis. Both of these therapists had the best results of the 10 therapists in the study (plus a nurse who had epilepsy herself): both the hypnotists were medically qualified and possibly therefore could be more flexible in the methods they used. Because of the various factors involved in therapist choice, availability and expertise, further examination of different therapist results will not be presented here, because it would be misleading, invidious and unfair. In the same way, we cannot be certain if any one oil was better than any other as the choice was left to the patient and economic factors were also involved; therapists also preferred particular oils. However, jasmine, the most expensive, may be the most successful, but not all patients liked the smell.

DISCUSSION

We present the results of our experiments with using aromatherapy (in various ways) in helping some people to learn to control their seizures. We saw the treatments as complementary rather than alternative and did not ourselves suggest withdrawal (partial or complete) of anticonvulsant medication. Some patients chose to do so, however (Table 4), and were usually successful if they did so. Most waited a few months and did it slowly (not all under medical supervision).

For some people the experiment has been successful and they have become and remained seizure free: more importantly they have, with help, developed a method of seizure control which they modify themselves. Several have spontaneously said that they have got some control back in their lives, particularly that they are no longer dependent on drugs which they perceive, rightly or wrongly, as 'medical control' which is independent of them. Some patients had a transient effect, which faded. In some patients there was no effect: in only a very few was there any apparent deterioration in seizure control which was probably no more than a chance event.

CONCLUSION

The method seems to work for some patients, although it is labour intensive and requires personal

Table 5: Oils chosen.

Oils	Initial choice	Final choice
Jasmine	35	39
Ylang Ylang	29	32
Lavender	13	11
Camomile	17	13
Bergamot	4	4
Marjoram	2	1

commitment and work on behalf of both patient and therapist and is time consuming. It is possible, but unproven, that commitment, enthusiasm and flexibility to get the most out of the treatment are important factors in its success: a mixture of aromatherapy massage and simple hypnosis seems the most long-lasting in effect. The simultaneous advantage and disadvantage of the treatment seems to be the amount of personal commitment and effort the patient (and therapist) have to give to it. It is time consuming which means it is unlikely ever to become a routine treatment, even if it were possible to determine those patients best suited to it. But, for some patients, prepared to give time to it, and who can find someone with the time, flexibility and knowledge to help them, it may have something to offer. If money was available, a properly controlled trial (against another method perhaps based on cognitive theory) would certainly be possible. One other factor that has not been established is whether one should start aromatherapy first followed by hypnosis or *vice versa* or whether they should be used together from the start of the treatment. Since people vary in their ability to self-develop an hypnotic technique (after initial instruction the patient is encouraged to develop the hypnotic technique by practice on their own), we tend to teach autohypnosis first followed by aromatherapy but are uncertain whether this is the best way to do it. Only a properly controlled trial would tell us. Unfortunately, lack of money prevents us, particularly as year on year reduction in our income (so called 'efficiency savings') has meant that we can no longer employ an aromatherapist.

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