

Comparison of hypnosis with conventional relaxation for antenatal and intrapartum use: a feasibility study in general practice

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SUMMARY. A hypnosis programme for antenatal and intrapartum use has been developed and successfully introduced into a practice as an alternative to conventional relaxation training. Of 96 women from the practice who delivered during the 10-month period of the study 51 opted for the psychoprophylaxis and 45 for the hypnosis. Details of the pregnancy, labour and postnatal period were collected for both groups, together with a subjective assessment of their satisfaction with labour.

Disparity between the ages and parity of the two groups made comparisons difficult. The duration of the first stage of labour was markedly reduced in the hypnosis group by 98 minutes for primiparas and 40 minutes for multiparas. A small (five minutes) increase in the length of the second stage may have been a result of the hypnotic relaxation. The verbalization has been amended accordingly. The hypnosis group were more satisfied with labour than the psychoprophylaxis group (mean satisfaction score 7.4 versus 5.6) and they reported other benefits of hypnosis, for example, reduction in anxiety and help with getting to sleep. Further studies are planned.

Introduction

THAT hypnosis is useful in obstetrics is well documented.¹⁻¹¹ In virtually all studies marked benefits of hypnosis were noted: reduction in the duration of both first and second stages of labour, decreased need for analgesia and diminished episiotomy and tear rates. Freeman and colleagues¹² reported an increase in the length of labour in their hypnosis group yet still concluded that for the subgroup of moderate and good hypnotic subjects less analgesia was required and labour was more satisfying. This was a randomly controlled trial, however, and as hypnosis is a therapy requiring high self-motivation, random allocation to hypnosis or conventional relaxation methods results in differences in motivation in the two groups: interpretation of the results must, therefore, be guarded.

In the papers referred to above the hypnosis is regarded as the 'active ingredient', yet, assuming that the hypnotic state has been obtained, it is the intra- and post-hypnotic suggestions which produce an effect. Freeman's failure to show any reduction in labour length¹² is hardly surprising if no such instruction was given. In the preparation of any hypnosis programme care must therefore be taken to standardize the verbalization and give appropriate instruction about the parameters under investigation.

Much time, money and energy is spent by the maternity services in providing conventional relaxation (psychoprophylaxis) classes. Yet, according to the literature, hypnotic procedures produce better results. Why then are these techniques under-utilized? Is it because the claims for hypnosis are false or because the methodology is not consistent with routine group use?

This paper reports on a hypnosis programme introduced into a general practice and presents the outcome of the pregnancies and labours occurring in the practice during a 10-month period, together with the women's assessment of their satisfaction with labour.

Method

Hypnosis

Hypnosis was induced using eye fixation with distraction followed by progressive muscle relaxation. The trance was deepened using visual imagery (a beach scene) and a background auditory input of the sound of the sea. The image of being on the beach, listening to the sound of the waves, was established as the 'base state'. This was followed by a modification of Hartland's¹¹ ego-strengthening routine.

Specific instructions relating to pregnancy and labour were then given, with the contractions being likened to waves rolling in from the sea. Suggestions were made for a reduction in pain, a quicker labour and easy delivery and a rapid recovery postnatally. In addition suggestions were made about successful breast feeding and the ability to fall asleep again quickly after the frequent nocturnal disturbances of a young baby.

The verbalization was recorded onto cassette tape by a professional sound recordist who dubbed into the background the sounds of the sea at the appropriate places. The programme lasted about 20 minutes.

Side 2 of the cassette formed an 'in labour' programme which consisted of instructions to enter the 'base state', together with continuous recording of the sounds of the sea.

The hypnosis class was held every week during the antenatal clinic at our Boreham surgery. The women were asked to attend at least each time they had to come for an ordinary antenatal appointment from about the 28th week of pregnancy. Copies of the tape were available at £2.00 each and many women elected to purchase one in order to practise at home.

Personal cassette players were donated to the labour ward of the local maternity unit to enable the women to listen to side 2 of the cassette while they were in labour.

Psychoprophylaxis

These classes were held at the hospital or local clinics and consisted of a series of four sessions which began when the women were about 28 weeks pregnant. The women were taught various patterns of breathing to help divert their attention from the pain of the contractions.

In addition to the preparatory methods both groups attended the standard series of educational classes and had a visit to the maternity unit.

Evaluation

Maternal age, parity, gestation length, the highest recorded blood pressure, and details of type of labour, labour length, antenatal problems, problems during labour, analgesia and blood loss were collected for each woman in the practice who delivered during the study period. After the delivery, the mothers were asked to score their satisfaction with labour on a linear analogue scale from 0 to 10, where 0 was a horrible experience and 10 was wonderful. Their eyeroll score was documented as a measure of hypnotizability.¹³ Patients were asked to roll their eyes as far upwards as possible and then with the eyes still looking up to close their eyes. Just as the eyes started to close the amount of sclera visible between the iris and the lower lid was determined on a scale of 0 to 4 where 0 has no sclera visible and 4 is all sclera. High scores are associated with a deep trance potential.

Analysis

The data were stored and analysed using a commercial database/statistical package (Starbase). Pregnancy and labour vary enormously and as this paper reports the results from only a small number of pregnancies no attempt has been made to measure the significance of the differences between the groups.

Results

Characteristics of the groups

Table 1 shows that there were some important obstetric differences between the groups: the psychoprophylaxis group being on average 1.5 years younger and having 14% more multiparas than the hypnosis group. In addition those multiparas had had more pregnancies than their hypnosis counterparts. These factors weigh against the hypnosis group obstetrically and this should be kept in mind when interpreting the results.

Table 1. Characteristics of the two groups of women.

	Hypnosis group	Psychoprophylaxis group
Number of women	45	51
Mean \pm SD age (years)	28.4 \pm 4.1	26.9 \pm 4.5
Number (%) of primiparas	22 (49)	18 (35)
Number (%) of multiparas	23 (51)	33 (65)
Mean \pm SD number of previous pregnancies	1.2 \pm 0.5	1.5 \pm 0.7
Number of hospital confinements	41	41
Number of home confinements	4	10
Mean \pm SD gestation (weeks)	39.7 \pm 1.3	39.6 \pm 1.1
Mean \pm SD eyeroll score ^a	2.6 \pm 0.8	2.1 \pm 0.9

^aRange 0–4, where 0 is not hypnotizable and 4 is a very good subject.

Details of pregnancy and labour

Table 2 shows the antenatal problems, type of labour, type of delivery and analgesia used for the two groups of women.

Blood pressure. Seven of the hypnosis group had diastolic blood pressures of 90 mmHg or over as opposed to four in the psychoprophylaxis group (Table 2), yet the mean blood pressures for the two groups differed by only 2 to 3 mmHg (131/81 mmHg for hypnosis group versus 129/78 mmHg for psychoprophylaxis group).

Blood loss. Mean blood loss (excluding the two women with antepartum haemorrhage) was 253 ml for the hypnosis group and 245 ml for the psychoprophylaxis group.

Table 2. Details of the pregnancies and labours.

	Number (%) of women	
	Hypnosis group (n = 45)	Psychoprophylaxis group (n = 51)
<i>Antenatal problem</i>		
Diastolic BP \geq 90 mmHg	7 (16)	4 (8)
Antepartum haemorrhage	0 (0)	2 (4)
Other ^a	1 (2)	2 (4)
<i>Type of labour</i>		
Spontaneous	31 (69)	35 (69)
Spontaneous plus augmentation	2 (4)	4 (8)
Induced	12 (27)	11 (22)
Elective Caesarian section	0 (0)	1 (2)
<i>Type of delivery</i>		
Normal	36 (80)	42 (82)
Forceps/ventouse	6 (13)	4 (8)
Vaginal breech	1 (2)	2 (4)
Caesarian section	2 (4)	3 (6)
<i>Analgesia</i>		
Nil/Entonox	18 (40)	18 (35)
1 dose pethidine	14 (31)	18 (35)
> 1 dose pethidine	12 (27)	13 (25)
General anaesthesia only	1 (2)	2 (4)

^aOther antenatal problems were anaemia and appendicitis in the psychoprophylaxis group and anti IgG, C3d and anti I antibodies in the hypnosis group.

Induction of labour. Both groups had a higher than expected induction rate but the reason for this is unclear. Three births in each group were induced because of high blood pressure in the mother and one because of an intrauterine death. Short stature and postmaturity accounted for the remainder, although only three women reached 42 weeks gestation. Different consultant attitudes towards induction may be responsible for these findings. This increased induction rate did not seem to affect the type of delivery, with 80% of the hypnosis and 82% of the psychoprophylaxis group having normal vaginal deliveries.

Analgesia. Despite the over-representation of primiparas in the hypnosis group 40% required no analgesia or Entonox alone compared with 35% in the psychoprophylaxis group.

Duration of labour

Maternal age and parity are factors known to influence labour length and on these parameters alone it would not have been unreasonable to expect labour to be longer in the hypnosis group. The time from onset of labour to delivery, however, was shorter in the hypnosis than the psychoprophylaxis group. Table 3 shows that this reduction is confined to the first stage and appears most marked for primiparas. Hypnotically prepared primiparas had a mean first stage of labour some 98 minutes shorter than those who attended the psychoprophylaxis classes and hypnotized multiparas were 40 minutes quicker than the others. The second stage of labour was five minutes longer in the hypnosis group for both primiparas and multiparas.

Outcome of pregnancy

Table 4 gives the details of the babies. There was an uneven sex distribution but this was within the range of normal variability

Table 3. Duration of labour for primiparas and multiparas.

	Mean \pm SD duration of labour (mins)	
	Hypnosis group	Psychoprophylaxis group
<i>Primiparas</i> ^a	(n = 21)	(n = 17)
First stage	496 \pm 234	594 \pm 231
Second stage	46 \pm 42	41 \pm 34
Third stage	6 \pm 3	9 \pm 8
<i>Multiparas</i> ^a	(n = 22)	(n = 31)
First stage	278 \pm 206	318 \pm 240
Second stage	17 \pm 19	12 \pm 7
Third stage	11 \pm 8	7 \pm 3

^aCaesarian patients not included.

Table 4. Characteristics of the babies and feeding patterns.

	Hypnosis group (n = 45)	Psychoprophylaxis group (n = 51)
<i>Babies</i>		
Number of males	18	30
Number of females	27	21
Mean \pm SD birth weight (kg)	3.39 \pm 0.48	3.40 \pm 0.55
Mean \pm SD Apgar score at 1 min ^a	7.5 \pm 1.4	7.3 \pm 1.4
Mean \pm SD Apgar score at 5 min ^a	9.0 \pm 0.6	8.9 \pm 0.5
<i>Feeding</i> ^a		
Mean \pm SD onset of lactation (days)	3.1 \pm 0.6	3.3 \pm 0.8
Number (%) breast feeding at 6 weeks	27 (60)	25 (50)

^aExcluding one stillbirth in the psychoprophylaxis group.

(chi-square test). There was one stillbirth in the psychoprophylaxis group. Birth weight and Apgar scores were almost identical in the two groups. At the six week postnatal check 60% of the hypnosis group were still breast feeding as compared with 50% of the psychoprophylaxis group.

Satisfaction with labour

Labour was more satisfying for those mothers who had the hypnosis — the difference being most marked for the primiparas (Table 5). However, the 10 multiparas in the psychoprophylaxis group who had home confinements had a mean satisfaction score of 7.6. The four women using hypnosis who had home confinements had a mean satisfaction score of 7.9.

Discussion

Although the differences in the use of analgesia during labour between the two groups are small they provide an encouraging indicator that this type of hypnotic suggestion is likely to reduce analgesic requirements. Other trials^{2,6} using hypnosis have obtained better results, with 59% of women not requiring analgesia. A direct comparison is difficult because in those trials a more personal approach was adopted with the hypnotist (obstetrician) actually being present during labour. In our hypnosis no attempt was made to check on how well the patients were responding

Table 5. Mean scores for satisfaction with labour.

	Mean \pm SD satisfaction score ^a	
	Hypnosis group (n = 45)	Psychoprophylaxis group (n = 50) ^b
Primiparas	7.3 \pm 1.5	4.4 \pm 2.5
Multiparas	7.7 \pm 2.0	6.3 \pm 2.9
All	7.4 \pm 2.4	5.6 \pm 3.0

^aRange 0–10, where 0 is a horrible experience and 10 is wonderful.

^bExcluding one stillbirth in the psychoprophylaxis group.

to the instructions, for if hypnosis is to challenge the role of psychoprophylaxis in routine antenatal/intrapartum care it has to be evaluated on the same *laissez-faire* basis as psychoprophylaxis.

Despite the weighting against the hypnosis group in terms of age and parity, the duration of the first stage of labour was markedly reduced for both primiparas and multiparas using hypnosis. The reduction was greatest for primiparas but if the difference in duration between the hypnosis and psychoprophylaxis group is expressed as a percentage of the psychoprophylaxis group time the difference between the primiparas and multiparas is comparable (16.5% versus 12.6%). Labour length is, of course, very variable and to demonstrate a statistically significant result with this level of difference between the means would require a group size of about 100. The cost of keeping patients in the labour ward is high and if these results can be reproduced on a larger scale costs could be saved without detriment to the patient.

The second stage of labour was slightly prolonged in the hypnosis group. Could this have been due to the hypnotic relaxation acting as a disincentive to push? This finding has prompted a change in the verbalization for future use.

In evaluating any changes in obstetric practice the clinical well-being of the mother and baby are of paramount importance but consideration must also be given to the subjective experience of childbirth. Mothers using hypnosis were more satisfied with labour than those using conventional relaxation, particularly the primiparas. However, many factors affect satisfaction and those women in the psychoprophylaxis group who had home confinements also gave high satisfaction scores.

Introducing hypnosis to the practice was a fascinating exercise and exposed considerable ignorance about the subject. It generated a lot of interest and most misconceptions were easily dispelled by explanation. A proportion of patients, despite explanation and reassurance, were undoubtedly frightened by the word 'hypnosis'. This was particularly true in the early stages, but the village grapevine worked well to dispel the myths and hypnosis is now accepted by many women in the practice as a normal part of antenatal care.

The classes were easy to run with either the general practitioner or the community midwife introducing each session. The tapes for use at home proved invaluable not only in the preparation for labour but also in helping to overcome some of the more tiresome problems of the antenatal (and subsequent postnatal) period, particularly with regard to sleep disturbances. Such is the popularity of the relaxation aspect that a cassette of the hypnotic induction, ego-strengthening and beach relaxation was produced for general use in the practice, with the demand from patients reaching over 300.

As a consequence of the results several minor changes have been made to the verbalization on the cassettes, particularly with regard to the second stage of labour. The 'in labour' side of the

cassette has also been upgraded to include specific instructions as to how to augment labour. A common criticism of the in-labour programme was the constant need to rewind the tape. There appears to be no easy answer to this problem.

Formal methods of assessing hypnotizability are complex and time consuming and require considerable expertise on the part of the assessor. Such assessment was beyond the scope of this study but the eyeroll score¹³ is quick to perform and was used as a guide to hypnotizability. The self-selected hypnosis group had a mean eyeroll score of 2.6 compared with 2.1 for the psychoprophylaxis group. Could it be that those with intrinsic hypnotizability are more likely to select themselves for this type of preparation? Observable response to the hypnosis ranged from light to very deep trance and undoubtedly the mothers' enthusiasm for the technique varied with their perceived response. There is, of course, a similar variation in response to the conventional relaxation methods and mere attendance at the classes does not equate with 'success'. Indeed it is our opinion that those who do well with the standard methods appear to enter a state similar, if not identical, to hypnosis. This similarity has been noted by others.¹⁴

A modified form¹⁵ of this hypnosis programme is now being offered routinely to all our antenatal patients as an alternative to the conventional classes. In addition it is hoped that hypnosis classes will soon be available at the local maternity unit to enable a larger evaluation to be undertaken.

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