

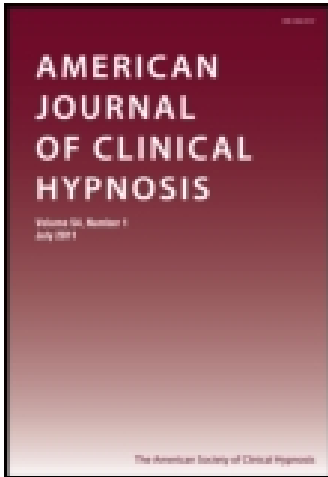
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Medical Hypnosis and Quadruplets: A Case Report

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This case report presents a new association reaction and a new treatment for quadruplet pregnancies. The hypnotic interventions can increase clinical management of quadruplet pregnancy. It illustrates new insights into the treatment of quadruplet pregnancies, and it suggests useful future research.

Key Words: Quadruplet pregnancy, foetal growth, prematurity, gestation, ego-strengthening

Introduction

A literature search, including a Medline search of more than 1,200 articles, turned up no information on the use of medical hypnosis in the obstetrical management of quadruplets. In fact, only three of more than 11,000 articles indexed in *Index Medicus* under "Pregnancy, Multiple" since 1966 have also been indexed under "Hypnosis". This is, to the best of our knowledge, the first case report of the use of hypnosis with a woman pregnant with quadruplets. This is an important area to study because, with the advent of ovulation stimulation and in vivo fertilization, multiple gestations have become much more common. Quoted incidences of quadruplet pregnancies vary from one in 677,000 to one in 5371 (Collins & Bleyl, 1990).

Collins and Bleyl (1990), in a study of 71 quadruplet pregnancies, reported that foetal growth progressed in a linear fashion until 32 weeks' gestation. Then it slowed. The number of "growth-retarded" foetuses (<10th percentile) dramatically increased at 34 weeks: Less than one-fourth of the foetuses are below the 10th percentile before 34 weeks, whereas 62% are below that level thereafter.

This article has two purposes. First, it illustrates how medical hypnosis can be used in multiple pregnancies to assist the mother in several ways. It may help to prolong the pregnancy and to overcome the mother's feelings of incompetence about

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nurturing the fetuses effectively. It also deals with personal discomfort. The article's second purpose is to provide transcripts (presented in block quotations) of selected hypnosis techniques used in the reported case.

In addition to its being the first report of hypnotically assisted prolongation of foetal growth with a new treatment method that was successful, this case is also unique because the mother is a family physician who treats obstetrical patients. The hypnotic interventions dealt with a number of the unique problems of multiple pregnancies, such as the distressing stretching pain and discomfort of the skin over the large abdomen. Hypnosis was used to minimize distress and increase the probability of prolonging the pregnancy to 32 weeks' gestation.

Case History

The patient was a 33-year-old woman who had become pregnant with quadruplets, following one trial with clomiphene citrate. She was a family physician practicing in rural Canada whose interest in hypnosis had been sparked by her work in low-risk obstetrical care, particularly attending labour and deliveries in a small community hospital at which epidural anesthesia was not available. After some training in hypnosis, she was able to use it in both her general and obstetrical practice with some positive results. The diagnosis of her pregnancy was made by ultrasound at ten weeks' gestation. The potential problems and complications of neonatal prematurity, familiar to her through her training, were highlighted during discussions she and her husband (also a family physician) had with neonatologists and perinatologists. They had great anxiety about the intact survival of the fetuses.

The closest tertiary-care maternity hospital (225 km away) was chosen as the appropriate facility for the quadruplets to be born. An admission date at 24 weeks' gestation (foetal viability) was set. She had been on bed rest at home from 18 weeks' gestation. Beginning at 20 weeks', some effacement of the cervix had begun, with no dilatation.

Once she had been admitted to the hospital, a consultation with a family physician trained in hypnosis was made. The purpose of hypnosis was to help her cope with the stresses of hospital confinement and her anxiety about intact foetal survival. A published article reporting the effective use of hypnosis for the treatment of premature labour (Omer 1987) inspired the use of the same principle to delay (or prevent) the onset of premature labour in this pregnancy. Other hypnosis work, with the goal of relieving the patient's discomfort and optimizing the pregnancy outcome, was also included.

Description of Treatment

The main objective of treatment was to prolong the pregnancy to 32 weeks' gestation. Hypnosis sessions took place on an average of once per week throughout the hospital stay, beginning at 24 weeks' gestation. The sessions lasted 30 to 60 minutes, and most trances were audiotaped, which enabled the expectant mother to practice the (most recent, usually) trance on her own (up to several times) each day. She had a private room and used a "Do Not Disturb" sign during the sessions. Hospital activity level was confined to "bed rest with bathroom privileges." During the trances, she assumed the left lateral decubitus position.

In summary, each visit consisted of interval history and supportive psychotherapy. Then a specific therapeutic experiential trance aimed at the current concerns and stressors was induced. After the trance, the patient was asked about her experience and her level of satisfaction with it. She was then given some direction on how frequently she was to listen to the tape and/or do auto-hypnosis on her own (self-initiated auto-hypnosis). The hypnotist taught autohypnosis to the patient in such way that she would be able to do it all on her own. It was emphasized that all hypnosis, in fact, is self-hypnosis (Kohen et al., 1997).

First trance (24 weeks' gestation)

Healing objectives:

- Address general nutritional concerns by increasing flow of saliva;
- Increase weight and growth, and
- Produce relaxation to assist in producing healthy babies.

In trance following total body relaxation, we focused on the uterus as a big muscle of longitudinal fibers, on letting them grow fast and relaxed with all the influence of hormones improving the stretching of each longitudinal fiber in order to provide more room for the four foetuses to grow normally. The profound relaxation response was used to relax the uterine vessels to improve circulation through the placenta so the foetuses would get more nourishment (facilitated by a high-calorie diet and frequent meals). She was to concentrate on using the sun to relax the abdominal muscles more, to give the uterus more room to grow and expand. Heat imagery was used to improve the flow of saliva and stomach digestive juices, to minimize heartburn, and to improve nutrition.

Second trance (25 weeks' gestation)

Healing Objectives:

- Concentrate on the power of the unconscious mind;
- Use the solar plexus maneuver for keeping the blood pressure down while improving uterine and placental perfusion, and
- Uterine relaxation including minimizing uterine irritability.

Third trance (27 weeks' gestation)

Healing Objectives:

- Improve sore buttocks from betamethazone injections;
- Improve energy level, and facilitate self-initiated trances (has difficulty doing trances on her own);
- Expansion and enlargement of the uterine cavity to accommodate the growing quadruplets, and
- Pain relief through glove anesthesia (Crasilneck & Hall, 1985, pp. 76-77) that was then was transferred to the injection sites.

Script for Uterine Relaxation

You can imagine this warmth relaxing every muscle fiber... every part of your uterus... that's it... completely relaxed... you are imagining the warmth spreading all over your uterus... softening up every corner and cell... that calmness may grow with every minute that goes by... with every breath you take... you can imagine those images...you can even imagine the change in color as the uterus relaxes inside your abdomen... you can feel the newness of spirit... the new sense of control... with your growing family (Omer, 1987).

Fourth trance (28 weeks' gestation)

Healing Objectives:

- Improve shortness of breath;
- Increase numbness for intramuscular needles, and
- Increase energy.

Script for Ego-strengthening and Increased Energy

One-quarter... you are making excellent progress and you will make better progress still as you listen to this fourth tape... every day you will become physically stronger... you will become more alert, more wide awake, and more energetic... you will become much less easily tired, much less easily fatigued... and much less easily depressed and much less easily discouraged (Hartland,1971).

Enjoy your trance, enjoy the newness of life, enjoy the nurturing of the four in one... Each day well-lived today makes every yesterday a dream of happiness and each day well-lived today makes every tomorrow a vision of hope, so look ye well therefore to this day, such is the salutation of the dawn (Cushing, 1926, p. 355).

Fifth trance (29 weeks' gestation)

Healing Objectives:

- Improve GI symptoms and
- Improve tight skin across the front of the abdomen by stretching skin from back around both sides.

Script for Abdominal Enlargement

...[A whirlpool bath will help your body create space] space for the uterus to enlarge... Imagine the uterine wall like a piece of clay that, as you warm it up to just the right temperature, can stretch a little bit easier so you can feel your skin warming and stretching normally, slowly, without any tearing - just stretching and responding to the pregnancy as you get into the thirties [30 weeks' of gestation]. You will find... that soothing warm whirlpool bath will also soothe the

uterine muscle, so it will be relaxed and any irritation will be flushed away with the whirlpool so the muscle will be placid...”

Sixth trance (30 weeks' gestation)

Healing Objectives:

- Help the uterus grow;
- Keep blood pressure down (e.g., diminish risk of toxemia);
- Prepare for delivery (the patient was anxious about having so many people — 20 for the four babies—required for her delivery), and
- help the patient interpret foetal movement as positive feedback.

Script for Interpretation of Foetal Movement as Positive Feedback

You will find that, as time goes on, you will feel the feedback from your infants that are nudging you with their knees and elbows and maybe moving their heads as they move around freely, stimulating one another.

Outcome

The pregnancy was terminated at 31 weeks' gestation by caesarean section without premature labour because of toxemia. The quadruplets, two girls and two boys, were born in good health, weighed 1200-1760 grams (2.6-3.9 pounds, total weight 13.5 pounds) and had no major complications of prematurity, other than their small sizes. They were not small for their gestational age.

Some Observations

Preterm delivery occurs in 6-8% of all pregnancies and is responsible for 75% of all perinatal deaths. Eighty-five percent of all neonatal deaths not attributable to anomaly are associated with preterm delivery, and 10% of the survivors suffer some form of disability (Olah & Gee, 1992). Despite improvement in obstetric management, the rate of prematurity has not changed appreciably in the last two decades (Crane et al., 1998).

Cumulative or chronic environmental stress as well as high scores on psychopathology have been consistently linked to preterm labor. The patient, a very high-functioning and hard-working professional woman, was stressed by the forced inactivity of her hospital stay and by her concerns for the successful outcome of her multiple pregnancy. Clinical studies suggest that interventions that reduce tension and anxiety can prevent or inhibit preterm labour and preterm delivery. Autonomic hyperactivity has been found repeatedly in women who experience preterm labour (Omer, 1988). Most of the preterm risk factor conditions could put the foetus under physiological stress, causing it to set in motion the train of events leading to parturition (Cheek, 1995). This study reports that the hypnosis relaxation response relieved stress.

Preterm deliveries were significantly reduced in France from 7.9% in 1971 to 5.8% in 1981. The reduction was more significant in 1988-89, with a preterm delivery rate of 4.1%. This was associated with a major reduction in the rate of, early preterm births (before 32 weeks' gestation) from 1.6% of births in 1972 to 0.7% in 1981, and 0.5% in 1988-89 (Papiernik, 1993). This was achieved by giving sick leave from work

to women who were suffering from work stress or work fatigue. Not all studies demonstrated an improvement with stress management (Bryce, Stanley, & Garner, 1991; Oakley, Rajam, & Grant, 1990; Villar, et al., 1992). However, Mamelle et al. (1997) demonstrated a significant decrease in the preterm birth rate in the experimental group, using the additional intervention of psychotherapy, compared to the control group, which received only conventional therapy. Mamelle et al. (2001) later designed a study to assess the effect of psychotherapeutic support of women hospitalized with preterm labour. These results showed a significant decrease in the early preterm birth rate (<35 weeks') from 25.7 to 5.9%.

Discussion

Hypnosis is an excellent way to reduce and even prevent stress prenatally as well as during labour and delivery. Numerous authors have noted that under hypnosis, women are relaxed, show less postpartum exhaustion, and feel surprisingly well after the delivery (Brown & Murphy, 1999). Lederman (1995) discusses cognitive and behavioral strategies including hypnotic relaxation for decreasing anxiety and promoting relaxation during gestation and parturition. These studies show that stress plays an important role in increasing the risk of preterm labour (Brown & Murphy, 1999). There have been no randomized controlled clinical trials comparing the relative effectiveness of medical hypnosis therapy with the usual therapy for preterm labour.

At the very least, the trance work done during this pregnancy was successful in relieving anxiety about its high risk, allowing the expectant mother to comply and cope well with the seven weeks of bed rest in the hospital before the quadruplets were born. Hypnosis was less helpful in relieving the many minor physical discomforts of pregnancy, including the usual gastrointestinal complaints. However, the "glove anesthesia" technique used for soreness she experienced in her buttocks from the betamethazone injections was very helpful in decreasing the associated anxiety, so that, while the injections still hurt, the pain was no longer distressing.

Another remarkable result of the trances occurred after the fifth session, which demonstrated a new association reaction. At 29 weeks' gestation, with a fundal height of 49 cm, her abdominal skin was too tight to possibly stretch any further. Suggestions were made, using the metaphor of a warm whirlpool bath, that the skin, tissues, and muscles of the abdominal wall would stretch in all directions, including around from the back. After that, her girth dramatically increased over a short period of time, so that several nurses who had been caring for her during her hospital stay commented on the change.

There were three other particularly helpful aspects of the trances:

1. The use of anatomically precise terms was important because of the patient's knowledge as a physician. "...practice relaxing and stretching those muscle fibers and stretching all the tissues of the uterus... the endocervical area and the cervical canal as it gets longer too... and the inner ring of the cervix can relax some, but the outer ring, the exocervix as you noted, it has been reported to you is staying competent and it will continue to stay competent... it will remain tightly closed as your longitudinal uterine muscles and fibers stretch and the uterus gets larger... you can be really proud of yourself...." The precise phraseology, of course, would have to be adapted according to the background

of the particular expectant mother participating in hypnosis.

2. The observation, during the trances, of normal events like increased foetal movement (which was routinely experienced) as sources of positive feedback, and its use for ego-strengthening, was very helpful.
3. Phrasing the unique circumstances of this pregnancy positively, as in "one day is equal to four baby-days, so you are doing well..." and "...you will think of the four neonatal teams just as a normal procedure for someone having four babies at once... so they are all part of the team..." was a good way to allay anxiety.

There were, however, phrases that were used in this trance work that could well have fed maternal guilt feelings if the outcome of the pregnancy had been less than successful. For example, the phrase "...by practicing your trances so you can bring them along to a point in time when they are all healthy and strong enough to live independent lives outside the uterus..." implies that the mother has power to achieve a favorable outcome, no matter what else may happen, if she practices her trances enough. In this high risk setting for the mother's health, the welfare of the mother must also be included in a suggestion like the following "...you will be able to postpone the delivery day to the most appropriate time for all four infants..." This can be done by eliminating the suggestion of omnipotence of mother and including parameters such as "...as long as it is safe for your health."

Because multiple gestations result in a large number of preterm deliveries, there is a great need for clinical trials on the use of hypnosis in multiple gestations. The best way to answer the question, "Does hypnosis make a difference?" is by doing a large multicenter randomized controlled clinical trial. Much more research is needed to answer this question.

Conclusions

Medical hypnosis was used as an adjunctive methodology to improve the quality of pregnancy, relieve stress, and possibly help prolong gestation in a woman pregnant with quadruplets. More clinical reports are needed on the use and results of medical hypnosis in multiple gestations. A controlled study concerning the effect of hypnosis on multiple pregnancies would be germane and timely.

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