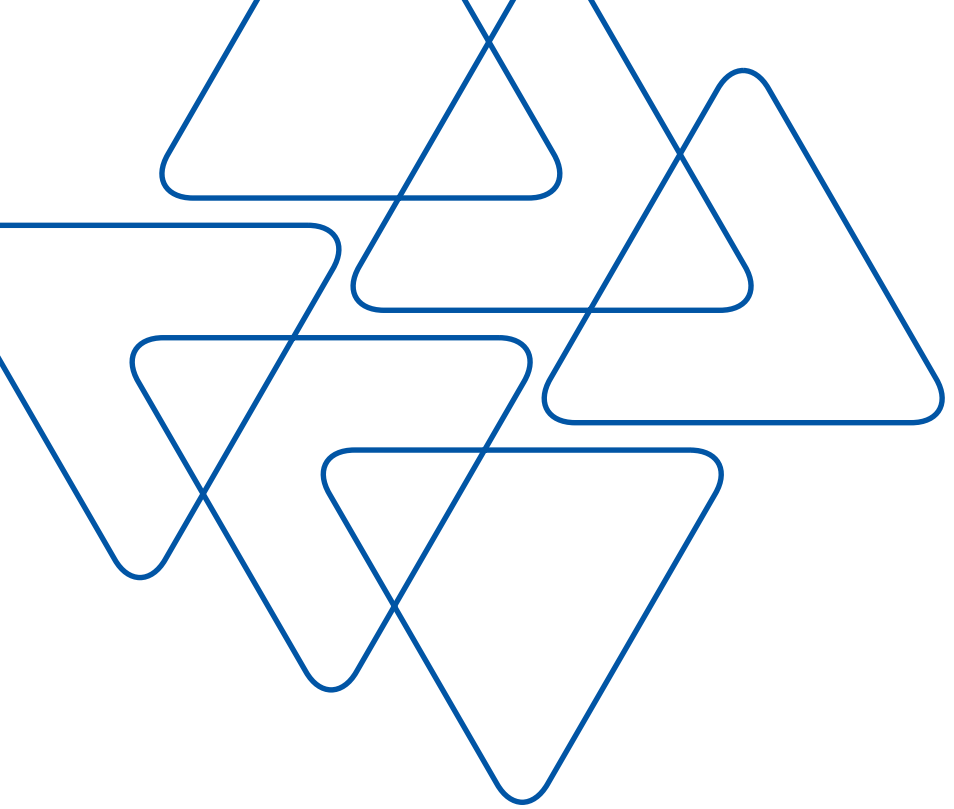

Hypnosis and communication in paediatric peri-operative care

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INTRODUCTION

Hypnosis and hypnotic communication allow the anaesthetist to give suggestions to children that can enhance their peri-operative care, reframe negative expectations and teach new skills to manage symptoms such as pain, anxiety and nausea[1,2]. The language of hypnosis can be particularly effective in children as they live in a world full of imagination and fantasy.

WHAT IS HYPNOSIS?

Hypnosis is a state of mind that we have all experienced, but are often unaware of. It may arise and fall away spontaneously, particularly when people are affected emotionally, for example while watching an engaging movie. It can also be deliberately induced by hypnotherapists or by activities such as meditation, yoga, exercising and mindfulness. Children who are anxious or in pain frequently experience hypnosis or trance-like states spontaneously making them highly responsive to suggestion. Suggestions are verbal or non-verbal communications that can alter perceptions, mood and/or behavior[3].

Spontaneous hypnosis in the peri-operative setting results in increased suggestibility so there may be no need for formal hypnosis as suggestions combined with specific language and communication structures may be all that is necessary. The utilisation of communication techniques allows the anaesthetist to enhance rapport and facilitate the effective delivery of therapeutic suggestions to improve peri-operative care.

CASE HISTORIES

Case one illustrates how skilled communication enhances peri-operative care for children. Introducing specific language into our everyday practice can be helpful for patients and their families, as we produce positive change in a period where negative expectations and anxiety can become overwhelming. Case 2 shows how formal hypnosis may be used in the peri-operative period to manage anxiety and specific fears such as needles and mask induction. Hypnosis can enhance analgesia, reduce peri-operative adverse effects such as nausea and allow patients to envisage recovery, healing and return to normal function.

CASE ONE. LANGUAGE AND COMMUNICATION

An eight-year-old girl, Lily, is booked for a tonsillectomy for recurrent tonsillitis. She had a general anaesthetic two years previously for a fractured forearm. Both Lily and her parents appear anxious and they are concerned about pain, nausea and breathing problems following surgery. Negative expectations abound.

Lily and her family are reassured that you will be looking after Lily and ensuring she is safe and comfortable when she wakes up in the recovery room. You check what name Lily prefers to be called, ask her permission to talk to her mum, and note her expression and demeanour. Matching vocal tone, body position and language to that of the family, listening to their concerns and confirming understanding and meaning enhances rapport. An acceptance of their reality (at least for that moment) opens up the possibility of a shift in mind set. Reframing and providing alternative perspectives as suggestions can shift negative thoughts to a focus on therapeutic goals.

On examining Lily, she is asked, "If you could go to your favourite place or do your favourite activity, sport, movie – what would that be?" This exploration allows the anaesthetist to take note of her likes and dislikes and the language she uses. As she (and her parents) begin to relax, you discuss the choice of anaesthetic induction. "And when you go to sleep for your operation, you can either breathe on the gas or we can put some cream on your hand to make it numb and then place a cannula into the vein and let you go to sleep that way". "And when you come to theatre, would it be OK if you take yourself back to your favourite place? Perhaps you could stay there, in your special place, while we take care of you, and you can look forward to waking up comfortably having something nice to eat, with mum and dad there to look after you? Would that be OK?"

Turning to the parents, the remainder of the anaesthesia can be described in terms of providing medications to ensure Lily is comfortable and able to eat and drink after her surgery. “And when she is coming out of the anaesthetic she will be watched closely in recovery by experienced nurses and you can look forward to seeing her soon after the surgery finishes. In fact, you may be pleasantly surprised at how well she recovers after surgery.” You offer Lily and her parents the opportunity to ask questions and you answer them. Although a sedative pre-medication is rarely required, it is available. However, the expectation is that she will be able to cooperate well.

When Lily comes to theatre she is asked several short questions designed to elicit a yes response such as “Is it OK to bring your toy in to theatre?” Then she is asked if she can climb onto the operating table or if she would like mum/or dad to help (double bind – a choice of comparable alternatives, as either way she will be on the bed). When lying comfortably, she is asked to “Take yourself to your favourite place” and given verbal cues to help relive the experience, “Notice the colours, the shapes, the sights, listen to the sounds, take a deep breath in and really step into it, really be there…”. You begin a mask induction – “as you go to sleep with the mask, would you like to breathe quietly or would you prefer to take deep breaths and blow the balloon up?” As breaths are taken the sevoflurane is introduced and you provide a suggestion of a smell, colour, feeling or sound that relates to her favourite place.

Hypnotherapeutic communication is frequently used by many anaesthetists during induction of anaesthesia[4].

The specific language and persuasive techniques to be discussed are:

1. Establishing rapport.
2. Persuasive language techniques.
3. Social proof.
4. Lived-in imagination.
5. Direct suggestions.
6. Informed consent.

1. Establishing rapport

Many anaesthetists rapidly establish rapport with anxious patients. A useful framework for building rapport is the LAURS acronym which provides a structured approach of listening, accepting, utilising, reframing and suggestion[3].

Introduction: “Hi – I’m ……., I’m the doctor who is going to take care of you during your operation”. Reframe to caring and personalisation.

Name: “Is it OK to call you Lily or do you prefer another name?” This acknowledges Lily as an individual.

Control and autonomy: Anaesthesia care frequently engenders feelings of loss of control and it is important to give some autonomy back to the patient and family. Asking “Is it OK if I talk to your parents?” may seem trite at first glance, but it acknowledges the child as an individual, gives them a feeling of control and builds rapport.

Surgery: “Do you know why you have come to hospital? Tonsillectomy – won’t it be nice when you don’t have tonsillitis anymore – are you looking forward to that?” A reframe focusing on the goal of surgery.

Mirroring Rapport can be facilitated by adopting the patient’s or parent’s vocal tone, posture and language in a manner congruent to that of the family. You can ask Lily what she likes doing or comment on an item of clothing or a possession.

2. Persuasive language techniques

“Yes sets”, “compliance sets” and “no sets” – by asking two or three simple questions early in the interaction, each question eliciting a “yes” answer increases the success of the compliance set that follows. For example:

Would you like to bring your toy into theatre with you? – yes

Are you looking forward to having something to eat after the operation? – yes

Would you like mum to hold your hand? – yes

Then move to a compliance set:

Can you lie comfortably on the operating table? – yes

Can you make sure you are in the middle of the bed? – yes

Can you hold the mask for me? – helpfully holds the mask

If the child is negative and disinterested you can substitute a "no set" and segue to a "yes set". The "no set" also acknowledges the child's feelings and builds rapport.

You don't want to be here today, do you? – no

You don't want to have an operation do you? – no

You don't want Mummy to be here either? – no

Now flip to a "yes set":

But you are here – yes

And your Mum is here – yes

And I'm here to help you – yes

And now a "compliance set":

So you can sit on mum's lap as you go to sleep.

Can you take some deep breaths and blow the balloon up?

That's great.

Double binds and presuppositions
"As you go to sleep, you can breathe on the mask or just blow it away". This sentence presupposes that Lily is going to sleep, and that she has a choice of comparable alternatives; either to breathe or blow. Another example of a double bind combined with presuppositions is:"When you are lying still on the bed, would you prefer to hold mummy's left hand or her right hand?"

Negatively valenced words, sabotage, and negative suggestion

Words with a negative connotation are best avoided unless the patient uses them first. They can act as negative suggestions and fuel potential negative emotional responses. These words include pain, vomit, sting and needle, which are commonly used in peri-operative settings.

Rather than ask post-operative patients how much pain they have on a one to 10 scale, they can be asked whether they are comfortable or how comfortable they are. When describing the anaesthetic process you can say "We will give a combination of medications to help you be comfortable after your operation, and you may be pleasantly surprised how well you feel".

Nausea and vomiting can be replaced by "We will give you medications which will help you to feel hungry so you can look forward to enjoying something to eat this afternoon". Asking a patient to imagine eating their favourite food acts as a distraction or a pattern break but also as a suggestion to be hungry on emergence.

Minimising words are unhelpful as they draw attention to the issue that you hope to minimise. So "Just a little sting" when inserting a cannula draws attention to the sting and acts as a negative suggestion. This has a nocebo effect, worsening the discomfort of cannulation. Negative suggestions can be replaced with a neutral or positive suggestion, such as "We'll use some local anaesthetic to numb the skin to make it more comfortable"[5].

Negating words can have the opposite effect. "Don't worry" or "Don't move" may have the unintended but opposite effect of causing worry or movement. Using "not" or "don't" in a phrase first requires that attention is drawn to the aspect that you hope to prevent. An alternative to "don't move" is "stay still".

Avoiding failure words. Asking someone to "try" to do something implies an acceptance of failure. "Just try to relax" often fails. If you want someone to relax, use either a direct suggestion "As you breathe out, you can blow away some tension and feel yourself relax"" or an indirect suggestion such as "Many children notice how slow breaths out allow them to feel relaxed".

3. Social proof can increase the likelihood of suggestions being accepted. "I am always amazed at how soon kids are able to eat after surgery these days" or "Most kids really enjoy an ice block a couple of hours after their tonsillectomy". These are indirect suggestions which imply Lily can do this too.

4. Lived-in imagination is a form of visual imagery that can be used to recall a previous experience and replace the current anxious state with the state of mind that was present in a favourite place or activity. The request for Lily to talk about her favourite place acted as a pattern break, a distraction and a means to access a more resourceful state from her past. Lived-in imagination may be enough to induce a hypnotic state that can allow suggestions to be given at the time of assessment and at induction in theatre. Hypnotic techniques such as lived-in imagination have been shown to be superior to midazolam premedication prior to inhalational induction[7].

5. Direct suggestions
Throughout the pre-anaesthetic and induction encounters Lily is in a suggestible state. This is due to anxiety, the use of persuasive language and lived-in imagination to access a hypnotic state. Suggestions are used throughout this interaction. The general themes are of safety, caring and good recovery from surgery with the

goal of reducing anxiety. There are also specific suggestions for pleasant smells, hunger and comfort. Prior to inhalational induction of anaesthesia, awake suggestions can be given to change the smell of the volatile anaesthetic agent from sevoflurane to a pleasant smell, ideally one that matches a child's likes, such as strawberries or chocolate. The possibilities are limitless and can be modified to suit the circumstances[6]. If the smell of strawberries is suggested and accepted, another suggestion of "looking forward to eating strawberries when you wake", can be given to enhance appetite and reduce the risk of nausea.

7. Informed consent
Instead of informed consent being a check list of possible complications and adverse effects which may act as negative suggestions[8], we endeavour to reframe informed consent as an opportunity to explain how we are going to help avoid complications. So instead of negative suggestions we give positive suggestions of comfort, appetite and caring. For example: "As part of Lily's anaesthesia care she will be given a number of medicines to make her feel comfortable as she awakens and returns to the ward. She can be given more medications in recovery or on the ward if needed to ensure she is comfortable". More serious but less common adverse effects can be put into a context of safety, for example – "One of my other concerns is ensuring Lily has a good airway both during the surgery and as she recovers. She will be watched carefully throughout the operation and as she wakes up". For a child we can also explain the anaesthetic in simple terms that emphasise therapeutic goals suggestive of rapid recovery. Suitable goals include eating and drinking when she feels like it or getting back to drawing or other favourite activity.

Approaching informed consent in this manner achieves the goals of providing truly informed consent without the nocebo effect produced by a list of negative outcomes. It is also likely that improved rapport leads to less risk of medical litigation.

CASE 2. PERI-OPERATIVE HYPNOSIS FOR RUBY

A seven-year-old girl, Ruby, with a genetic predisposition to endocrine tumours was referred for hypnosis prior to prophylactic thyroidectomy. Ruby has developed anticipatory anxiety and distress with repeated venous access procedures. She was offered hypnosis to help manage her needle phobia[9-11] and to reduce pre-operative anxiety and post-operative pain.

The structure of a hypnotic session for perioperative care and needle phobia involves:

1. Assessment.
2. Rapport.
3. Suggestibility tests.
4. Induction and deepening of hypnosis.
5. Suggestions.

1. Assessment
Information was gathered during a phone interview with Ruby's mother. The paediatric hypnosis process was described and she was keen for her daughter to proceed. Dealing with these aspects during the phone call meant that the initial session could focus on solutions and positive outcomes.

2. Rapport
In a similar manner to Case 1, rapport was established using the LAURS approach[3].

3. Suggestibility tests
Ruby was offered a trial of formal hypnosis to check that she was comfortable with the technique. The "balloon and dictionary" suggestibility test was used to give a brief experience of hypnosis.

"Close your eyes, and place both arms out in front of you, one palm up and the other down. Great, now I am going to place the biggest book in your house (press gently on their palm) and I would like you to balance that large heavy book in your hand. While you keep holding that large heavy book, I would like you to notice me tying a large helium balloon to the other wrist, you can use your imagination to picture that balloon – It's colour, it's size, it's shape, you can feel the ribbon tied to your wrist and you can feel the balloon starting to pull your arm upwards…"

"Now open your eyes and see where your arms are." One arm will almost always be 10-20cm higher and the other 10-20cm lower than the starting position. "That's fantastic… You are good at using YOUR imagination!"

At this stage, we have achieved four essential elements for hypnosis – a belief that hypnosis is real, a realisation that they can use their imagination, a conviction that it will do something and an expectation that hypnosis will help.

4. Induction and deepening of hypnosis

After checking with Ruby, the balloon and dictionary suggestibility test was used as a hypnotic induction.

"And now begin to focus on the arm, effortlessly floating, suspended by three helium balloons, and imagine what will happen as I push your arm down, it just pops back up, pulled up by that balloon, it just pops back up each time I push it down, and as your mind relaxes it can be open to suggestions".

When you stop pushing the arm down, it usually remains suspended, which is a hypnotic phenomenon of a cataleptic limb. The cataleptic limb can be used to further deepen hypnosis – "As that limb begins to slowly sink down, you can allow yourself, to become even more relaxed, and as it comfortably rests on your lap you can be even more deeply relaxed and begin to…" Adapted from video demonstration[12].

There are many ways to induce hypnosis in children including "lived-in imagination" as described in the first case study, or guided imagery, for instance: "imagine flying up to the sky and finding a very comfortable cloud to lie down on". The choice of technique will depend on the child's individual likes and dislikes, age, developmental stage and the hypnotherapist's preference. The actual induction technique is not important. The predictors of success are rapport, engagement and development of focused attention.

Deepening of hypnosis may be required in adolescents and is almost universal in adults, however with children the induction is often all that is needed to achieve an adequate depth of hypnosis. There are a variety of deepening techniques, with children these can be simply using a series of inductions such as lived-in imagination, visual imagery or muscle relaxation stacked upon each other. In adolescents and adults deepening may involve utilisation of catalepsy, fractionation – which involves partially awakening from hypnosis and then re-inducing hypnosis several times or the use of indirect techniques such as metaphor or story.

The depth of hypnosis may be tested by observing the response to suggestions and by observing hypnotic phenomena such as muscle relaxation, catalepsy, slowing of breathing, eye movement and posture.

Further reading[13-17].

5. Suggestions

Once hypnosis has been induced suggestions are given to achieve the goals of hypnotherapy. As with Case 1, specific language is important. Suggestions can be given directly – "As X happens then Y can follow", or indirectly with the use of a story, an illustrative example which relates to the child's interests and development stage, or citing the experience of others. Suggestions for peri-operative care for Ruby may include relaxation, pain management, symptom relief and prevention (nausea and itch), ego-strengthening, envisaging a time when they can return to their favourite activities and teaching self-hypnosis.

Relaxation

Suggestions to promote relaxation include muscle relaxation, breathing techniques such as awareness of breathing, slowing breathing and blowing away tension and anxiety, and the use of metaphor. For example, filling a basket with all of your cares and worries then floating this away.

Pain management

Strategies for using hypnosis and suggestion to manage pain include managing anxiety, altering perception of pain, dissociating from pain, substituting feelings that are antithetical to pain, distraction techniques and envisaging a time in the future when they have healed and are comfortable[17].

Hypnosis is used to suggest altered pain perception, such as suggesting numbness or presence of local anaesthesia, or loss of sensation. Common techniques are the magic glove or anaesthetic glove – "picture putting on a fantastic glove, of the most comfortable material that is soaked in local anaesthetic"[1].

Another suggestion utilises the analogy of the wiring to the lighting in a house, and using switches to turn off sensation to a limb or part of the body[20].

Dissociating suggestions include moving one's self away from the pain – "Take yourself away on your bike ride, leave all the discomfort as you go to that favourite place (lived in imagination from Case 1)…" utilised with self-hypnosis.

Suggestions for feelings antithetical to pain include replacing pain with comfort, laughter, relaxation, strength or confidence.

Distraction can be achieved by using lived-in imagination, or by techniques such as a "Trip around the body". This technique uses a metaphoric story of shrinking down and travelling around the body to check all the organs. Taking a repair kit but also noting the strong heart and lungs pumping blood and delivering oxygen.

Ego-strengthening

Drawing on the child's previous experiences and capacities, direct suggestions of their ability to overcome challenges and use their strengths can be given.

Forward progression

Re-focusing the patient on the goal of surgery and envisaging a time when they are fully healed moves them away from their negative expectations of surgery to a time when they have overcome obstacles and life is normal again.

Post hypnotic suggestions

While in hypnosis a suggestion can be given to allow the child to go rapidly into hypnosis at a later time. This can be anchored with an action such as gently pressing the shoulder along with a suggestion of going rapidly into hypnosis at a later time when they wish to go into hypnosis and the shoulder is pressed by the hypnotist. This can be utilised for subsequent sessions or on arrival in theatre.

Teaching self-hypnosis

Self-hypnosis can be taught within hypnosis and later practiced. While in self-hypnosis the child is taught to use the techniques that were part of the suggestions and metaphors used previously by the hypnotherapist.

"In a moment, I will ask you to focus on a spot on the ceiling. When your eyes go blurry or start to tire, I would like you to take a deep breath in, and then count backwards from five. As you breathe out, shut your eyes and drift down into hypnosis. Allow your whole body to relax with each breath out and feel strong with each breath in. As you relax take yourself to that safe place, see all the sights, the colours, the shapes…"

Then suggest that they use one of the techniques to manage anxiety or pain that they have learnt, such as lived-in imagination, the magic glove or floating up to a cloud full of comfort.

MANAGING NEEDLE PHOBIA WITH HYPNOSIS

As part of her peri-operative hypnosis Ruby was taught self-hypnosis and the use of lived-in imagination to dissociate from pain and anxiety. She also used suggestion of an anaesthetic towel to create numbness and comfort, and she rehearsed successful venepuncture using these techniques. She used these techniques in the first session and had her pre-operative bloods taken without distress or discomfort.

Other approaches to needle phobia include graded exposure to needles during hypnosis, modifying memories of previous distressing needle events and rehearsing success in the future[19].

SURGERY

Arriving in theatre Ruby appeared calm, and voluntarily climbed onto the operating table. She kissed her mother and as her shoulder was pressed she was asked to count backwards from five and take herself back into hypnosis. "Take yourself into that beautiful relaxing rainforest as we look after you". Breathing on the gas, she received suggestions to smell the damp leaves in the rainforest (as the sevoflurane was turned to 8 per cent) and look forward to something really nice to eat in the afternoon. Further reminders for self-hypnosis were given after she woke up. She had an uneventful recovery with minimal analgesic requirements[20].

CONCLUSION

Hypnotherapy can be useful to improve pain management, nausea and anxiety about surgery, anaesthesia and venipuncture. The goal is to allow patients to use their own capabilities to manage the challenges of the peri-operative journey and to enhance their care and recovery. Essential features of this process are establishing rapport and using the language of the subconscious. Paediatric anaesthetists are in the fortunate position of being able to practice hypnotic inductions for many routine patients. This equips us with very useful skills for managing problems which benefit from a hypnotic approach.

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