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Belonephobia

A fear of needles

Belonephobia is an unreasonable and altered response due to the fear of needles. It affects up to 10% of the population and has implications for treatment and follow up, especially in the paediatric setting (see *Case study*). A three step behavioural approach involving recognition and relaxation, control and preparation, and graded exposure, can be effective in overcoming belonephobia. This will assist with nonurgent minor procedures being undertaken.

Case study

A female, 17 years of age, presented for a skin check. Twelve months ago, she was strongly advised to have a mole removed from her left shoulder due to the suspicious nature of the lesion. However, she decided not to go ahead due to her phobia of needles and was lost to follow up.

The lesion has now doubled in size. There are no other malignant symptoms. Her risk factors include frequent sunbathing and a second degree relative diagnosed with malignant melanoma at the age of 30 years. She has no other relevant medical history, is a nonsmoker and has no known allergies. On examination, there is a single lesion located on the posterior aspect of the left shoulder tip, measuring 4 mm in diameter. Dermatoscopy reveals a pigmented lesion with atypical melanocytic network, asymmetrical margins with blue and white veils. General examination is unremarkable. In particular there is no lymphadenopathy.

The possible diagnosis of melanoma and surgical treatment was explained to the patient. She returned 3 weeks later, accompanied by her mother. Upon arrival, the patient became quite agitated. She developed symptoms of nausea, facial flushing and dizziness, and was reluctant to proceed. After employing relaxation techniques and distraction strategies, she eventually consented to the procedure.

Histopathology revealed a 3 mm malignant melanoma in situ (level I). She was referred to a general surgeon for further excision and follow up.

Discussion

Fear is a normal physiological response to an external threat.¹ Belonephobia is an altered unreasonable response toward fear of needles or having to have a needle.¹⁻⁴ It is a common but not a very well recognised medical condition, affecting about 3.5-10% of

the population.^{2,5} According to Nir Y et al,⁵ the median age of onset is 5.5 years. Belonephobia can cause distress for patients, parents of young children, and health care workers, especially phlebotomists and anaesthetists.

Patients often complain of a range of physical and emotional responses including palpitations, shortness of breath, dizziness, anxiety, irritability, insomnia, lost of appetite, fainting, and the feeling of impending 'doom'.³⁻⁵

Belonephobia has both medical and social implications.⁴ Patients will often go to great lengths to avoid having necessary blood tests, immunisations, dental check ups, skin testing, and as illustrated in the case history, lifesaving minor surgical procedures.

Management

Strategies need to be implemented to help people deal with their physiological response. Thurgate C et al⁴ developed some useful strategies in dealing with

paediatric patients and their families in response to belonephobia. A three step approach of:

- recognition and relaxation
- control and preparation, and
- graded exposure.

Recognition and relaxation are crucial steps. These include identifying those at risk and discussing the procedure in detail, as this has been shown to help alleviate feelings of anxiety and fear of the unknown. Commonly, those at risk are individuals who have had previous traumatic experiences with needles, such as a child remembering his first visit to the dentist, and those who have extreme sensitivity to pain.²⁻⁵ Thurgate C et al⁴ introduced a self assessment tool where a child (of appropriate age) reports his or her own level of anxiety on a scale of 0 to 10 (zero being no fear at all and 10 being most severely affected by anxiety). At any level higher than three, it is recommended that counselling, cognitive behavioural therapy, hypnosis, distraction and relaxation are employed before any procedure.⁴ This assists in establishing rapport and relationship between staff and patients, as well as allowing enough time for the child to be prepared emotionally and psychologically.

Control and preparation encourage the child to participate in decision making and optimise ways to relieve tension.²⁻⁵ At this stage, the child can choose their own environment and have a support person (usually a parent). They are also encouraged to talk about their worries and ask questions in relation to the procedure.^{4,5}

When the child and parents feel they are ready to proceed to the next step, graded exposure is employed.⁴ Current literature supports the frequent use of diagrams, toys and dolls to illustrate the steps involved in the procedure.¹⁻⁵ This stage refers to the direct observation of a child's response: the verbal and nonverbal cues when he or she is exposed to medical equipment used during a certain procedure: from cottonwool, to alcohol wipes, topical anaesthetic cream, and finally to unopened syringes and needles.⁴

Fidgeting is often a subtle sign to nervousness and is often overlooked.⁴

In order to build trust and rapport with the child, it is important to stress that the procedure will not be carried out until the child is ready.⁴ Duff et al² emphasised that the participation of a child during the procedure, eg. unwrapping the syringes, removing the alcohol wipe from the package and permitting the child to cry or shout when the needle is inserted into the skin; helps in reducing their level of anxiety and promotes a positive outcome.

Conclusion

The three step approach can assist in relieving fear and anxiety of patients suffering from belonephobia. Health professionals involved with the care of paediatric patients should be trained to recognise this condition and develop strategies in order to help patients overcome this problem.

Conflict of interest: none declared.

References

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