

BLOOD-INJURY PHOBIA

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ABSTRACT

Blood-injury phobia is a unique and peculiar phobia. It is different from other phobias in that it evokes a diphasic cardiovascular response; it has a propensity to induce fainting and nausea more than fear and anxiety; and often there is a family history of a similar phobia. Although it may cause no great difficulty or social handicap in everyday life compared to social phobia, agoraphobia or other simple phobias, it can have grave implications and may even become life-threatening when it prevents essential medical procedures. Unfortunately, not many of its sufferers come for treatment until circumstances require urgent attention. Yet, it can be effectively treated behaviourally by modelling and exposure therapy. Two cases of this fascinating condition are described.

Keywords: blood-injury phobia, bradycardia, fainting, behaviour therapy

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INTRODUCTION

Human beings have a natural tendency towards uneasiness at the sight of blood, injury, deformity or medical procedure. A general discomfort, feeling dizzy or nauseous, or very occasionally, faintings are not unusual during the initial postings of trainee of pathology, haematology and traumatology, even though potential blood-injury phobics would normally have excluded themselves from such courses and related profession.

Phobia of blood is known as haematophobia or haemophobia, while phobia of injury is traumatophobia. The two are commonly subsumed together as blood-injury phobia which is classified as a specific phobia (ICD-10, F40.2)⁽¹⁾ or simple phobia (DSM-3R)⁽²⁾. Although it may cause no great difficulty or social handicap in everyday life compared to social phobia, agoraphobia or other simple phobias eg dog phobia, it can have grave implications and may even become life-threatening. When it prevents essential medical procedures such as urgent surgery, blood transfusion or insulin injections, treatment is almost always mandatory. Indeed such emergency is not an uncommon reason for referral⁽³⁾. Such patients avoid close contact with sick people, refuse hospital appointments and would not view television programme or read newspaper reports about trauma or disasters. Woman sufferers may even avoid pregnancy as childbirth is associated with blood and medical procedures⁽³⁾. There is a dearth of information about this condition in the local literature. Neither has there been any epidemiological study ascertaining its prevalence or interference with medical procedures.

CLINICAL FEATURES

Blood-injury phobics are distinct from all other phobics in developing bradycardia and actual fainting when in contact with blood-injury stimuli. Initially there may be a slight rise in heart rate and blood pressure. This usually lasts only a few seconds or the very most minutes, followed by marked vasovagal slowing of heart rate⁽⁴⁾. This exaggerated physiological response is commonly accompanied by a myriad of other symptoms such as nausea, sweating, pallor and syncope. Schraeder et al⁽⁵⁾ reported the case of a 21-year-old student with blood-injury phobia whose fainting during exposure to the offending stimulus precipitated a generalised seizure. This was reproducible with a repeat exposure

to the stimulus under electrocardiography and electroencephalography monitoring.

Blood-injury phobia usually has its onset in childhood. This may reflect our tendency to encounter blood-injury cues for the first time as children⁽⁶⁾. Agras et al reported that the prevalence of injection phobias was less than 1 per 1,000 people in the general population, but 140 per 1,000 population aged 20 years and below⁽⁷⁾. The sharp decline after this age indicates that these phobias are relatively short-lived. There is often a family history, with a quarter reported in the American studies⁽⁸⁾ and two-thirds in biological relatives in a Swedish study⁽⁴⁾. This is 3 to 6 times higher than those found in families of agoraphobia, social, and animal phobias⁽³⁾. Monozygotic twins show higher concordance for the illness than dizygotic twins⁽⁹⁾. Ost's retrospective study of an impressive 81 blood phobics and 56 injection phobics showed that a majority (52%) of the patients attributed the onset of their phobias to conditioning experiences, while 24% recalled vicarious experiences, 7% instruction/information and 17% could not remember any specific onset circumstances⁽¹⁰⁾. In a separate report, he noted that a higher proportion (61%) of blood-phobics than injection phobics (29%) had first-degree relatives with the same phobias⁽¹¹⁾.

TREATMENT

Although many blood-injury phobics would avoid attendances at the hospital or clinics, treatment would become mandatory if life is endangered. The same principle underlying exposure therapy, ie confronting the feared stimulus till habituation occurs instead of avoidance, has been the mainstay of treatment⁽³⁾. The therapist helps the patient to elicit his avoidance profile of feared situations, eg hypodermic needles, reading press reports of accidents and disasters, visits to hospital, etc, and then construct a hierarchy based on these fears. Graded exposure commencing from the least feared to the most feared situations in a prolonged manner, usually more than an hour or so, is carried out by the patient himself. Occasionally modelling, eg therapist handling a hypodermic needle in the presence of the patient, may be useful as an initial step to help the latter pick up his courage in order to commence his self-help behavioural programme. Homework recordings of such exposure tasks are reviewed regularly by the therapist to ensure proper administration of the programme. Habituation occurs more quickly in-vivo (real situations) than by imagery⁽⁶⁾. As one of the characteristic features of blood-injury phobia is the parasympathetic response with a possible hypotensive syncope and severe bradycardia, it is prudent to begin the exposure task in a reclining position. With subsequent practices after habituation has occurred, the patient may then attempt to confront the phobic cues in the sitting, and finally standing

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positions. Fainting may also be less likely if he tenses his muscles, and bradycardia averted by physical exercises. Whereas a reduction in pulse rate signifies habituation in other phobias, a rising pulse to baseline indicates habituation in blood-injury phobias^(3,8,12).

CASE REPORTS

Case 1

Patient LTK, a 24-year-old gentleman, was referred to the psychiatrist after an episode of fainting spell just before an injection of local anaesthetic was about to be given for an incision and drainage of an infected sebaceous cyst. Initially the polyclinic physicians had thought that LTK had a fit, but the electroencephalography was normal. Neither was there a history suggestive of hypoglycaemia. He had been able to undergo injection and vaccination procedures in the past, but only with much panicky feeling, sweating, nausea and giddiness. Although he had always disliked visiting hospitals and clinics, which was also the reason why the cyst has become infected due to delaying attendance for medical attention, it did not prevent him from seeking medical consultations provided no surgical procedure was required. Treatment goals included handling uncapped hypodermic needles and allowing his blood to be taken for laboratory tests. Initially viewing of pictures depicting simple surgical procedures was carried out. This led to visible autonomic reactions such as hyperventilating, sweating, pallor and muscular tension. At the fifth session, modelling by the therapist handling an uncapped hypodermic needle was carried out to demonstrate to the patient that his fear was unfounded. He was then encouraged to join in a series of interaction with the phobic object. Finally, he continued to practise his newly learned skill in between sessions as homework. LTK managed to achieve his desired treatment goals after twelve clinic sessions.

Case 2

Patient BW had a 3-year history of obsessive compulsive disorder characterised by fear of contamination leading to cleaning and checking rituals up to 5 hours daily. Incidentally, he also had a blood-injury phobia characterised by feeling nauseous and giddy at the sight of blood or seeing any person with a physical deformity. He would close his eyes whenever there were pictures of accidents and injury during the evening television news report, and would not watch medical documentary on television or read about such reports. He avoided the Accident and Emergency department of the hospital. Interestingly, his father and uncle had a similar phobia.

BW's obsessive compulsive disorder responded remarkably to behaviour therapy consisting of exposure to feared stimuli eg touching door knobs, followed by response prevention eg not washing hands after "contamination". Using the same principle of exposure therapy, he began looking at pictures of blood and injury, and reading press reports of accidents, major disasters and diseases. He would talk about cancer, AIDS, infectious diseases, etc to a family member or friend daily. The time came when BW actually allowed his blood to be taken from an ante-cubital vein, a procedure he would never have allowed before this treatment. This was done with the patient lying down. The pulse rate dropped from an initial tachycardia (108/min) at the sight of a hypodermic needle, to 60/min when blood was gradually drawn from the venepuncture. He would then continue to look at the blood contained in a test-tube, until his symptoms of giddiness and nausea abated, before standing up. He was encouraged to keep the tube of blood in his pocket throughout the day, which he did. This brought on rapid habituation. In addition, BW would handle a pig's liver (to simulate clotted blood) and cut it with a

knife. With permission from the nursing officer in-charge, arrangement was made for him to spend an hour three times a week at the waiting area of the Accident and Emergency Department of a general hospital, watching patients and casualties attending the clinic. By the eighth session, BW was able to have his blood taken while seated, and with minimal drop in his pulse rate when this was done.

DISCUSSION

The above two cases illustrate the use of exposure therapy in the treatment of blood-injury phobia. The rationale of therapy was easy to understand, the outcome was excellent, and apart from the initial modelling by the therapist, there was not much need for therapist-aided exposure. Both patients carried out their self-help programme diligently, with the therapist playing the role of monitoring and providing guidance to ensure habituation and generalisation. Moreover, no symptom substitution has occurred. Bandura has used the technique of modelling to eliminate snake phobias rapidly and completely, and the success in the laboratory session was generalised to other situations. He suggested that the goals of treatment should not only be to extinguish a fear but to have the patient develop a sense of self-competency, and transfer the extinction to other areas and treatment settings, and acquire a generalisable skill for coping with fear-provoking situations⁽¹³⁾.

Although blood-injury phobia has been classified as a simple phobia (DSM-3R), it can become life-threatening when it presents as an obstacle to necessary surgery or interferes with essential medical procedures. It is different from other simple phobias in that it induces bradycardia and vasovagal syncope rather than tachycardia which is common with other phobias. Graham et al suggested that this vasovagal syncope is the second phase of a diphasic response, the first phase being a transient tachycardia and mild hypertension⁽¹⁴⁾. Vasovagal syncope is distinguished from hysterical fainting by hypotension, bradycardia, electroencephalogram slowing, and prompt return of consciousness on lying supine. In contrast, hysterical fainting is not accompanied by any known physiological changes and persists for an extended period even after adopting a supine position. A consequence of the cardiovascular response of blood-injury phobias is that during treatment by prolonged exposure, their heart rate is normalised by increasing, not decreasing, to baseline. Because of its unique physiological component, Curtis and Thyre⁽¹²⁾ suggested that it warrants a diagnostic category of its own rather than being included in the simple phobias.

CONCLUSION

Blood-injury phobia is a unique and peculiar phobia. Three features which distinguish it from other phobias are: (a) its physiological diphasic cardiovascular response, (b) it may induce fainting and nausea more than fear or anxiety, and (c) it has a strong family history. It can become life-threatening when it prevents necessary medical intervention. Unfortunately, not many of its sufferers come for treatment until circumstances require urgent attention. Yet, it can be effectively treated behaviourally by modelling and exposure therapy.

REFERENCES

1. World Health Organisation. Classification of Mental and Behavioural Disorders: clinical description and diagnostic guideline. International Classification of Diseases. 10th ed. Geneva: World Health Organisation 1992.
2. American Psychiatric Association. Diagnostic and Statistical Manual of Diseases. 3rd ed. Revised. Washington DC: American Psychiatric Association. 1987.
3. Marks IM. Fears, phobias, and rituals: panic, anxiety and their disorders. New York: Oxford University Press. 1987.
4. Ost LG, Lindahl IL, Sterner U, Jerremalm A. Exposure in-vivo vs applied relaxation for blood phobia. *Behav Res Ther* 1984; 22: 205-16.
5. Schraeder PL, Pontzer R, Engel TR. A case of being scared to death. *Arch Intern Med* 1983; 143: 1793-4.

6. Marks IM. Blood-injury phobia: a review. *Am J Psychiatry* 1988; 145: 1207-13.
7. Agras S, Sylvester D, Oliveau D. The epidemiology of common fears and phobias. *Compr Psychiatry* 1969; 10: 151-6.
8. Thyer BA, Himle J, Curtis GC. Blood-injury-illness phobia: a review. *J Clin Psychol* 1985; 41: 451-9.
9. Torgersen S. The nature and origin of common phobic fears. *Br J Psychiatry* 1979; 134: 343-51.
10. Ost LG. Acquisition of blood and injection phobia and anxiety response pattern in clinical patients. *Behav Res Ther* 1991; 29: 323.
11. Ost LG. Blood and injection phobia: background and cognitive, physiological, and behavioural variables. *J Abnorm Psychol* 1992; 101: 68-74.
12. Curtis GC, Thyer B. Fainting on exposure to phobic stimuli. *Am J Psychiatry* 1983; 140: 771-4.
13. Bandura Ar, Jeffery W, Gajdos E. Generalization change through participant modelling. *Behav Res Ther* 1975; 13: 141.
14. Graham D, Kabler J, Lunsford L. Vasovagal fainting: a diphasic response. *Psychosom Med* 1961; 23: 493-507.

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