



BMH Medical Journal 2016;3(3):76-78 **Brief Review**

## Paediatric Blood-Injection-Injury Phobia

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### Abstract

Blood-Injection-Injury phobia is a major health issue throughout the life span. It usually starts in early childhood. Avoidance of health care is seen in such individuals. Children with blood injection injury phobia have uncontrollable fear of blood, injury, injections and needles. Because of the intense fear, these children will do everything possible to avoid it. Various physical symptoms including increased heart rate, chest discomfort, trembling movements, feeling of choking and syncope may occur in these children on mentioning about blood, needles or any injury. Vasovagal fainting with diphasic response pattern occurs in about twenty percent of children on exposure to the phobic stimulus. Other anxiety disorders, depressive disorders and attention deficit hyperactivity disorder also occur co-morbidly in children with blood-injection-injury phobia which makes the prognosis poor. Avoidance of health care due to phobia causes significant negative impact on health outcomes. Hence early diagnosis and urgent management of blood-injection-injury phobia in children is essential.

**Key Words:** Blood-Injection-Injury phobia, Specific phobia, Children

### Introduction

Epidemiological surveys have proved that one third of the population is affected by an anxiety disorder during their lifetime. Anxiety disorders are associated with high health care costs [1]. Experiencing fear in dangerous situations is normal and it has a protective purpose. Normal fear activates the "fight or flight" response and make the individual alert to respond quickly in dangerous situations. But in phobia, there is unreasonable fear which leads to intense anxiety and avoidance. Specific phobia is an anxiety disorder which is characterized by persistent, irrational fear of circumscribed objects or situations.

The one year prevalence of specific phobia is 7.9% [2]. Specific phobia has a lifetime prevalence of 12.5% [3]. There are four subtypes of specific phobia which include animal phobias, natural environment phobias, blood-injection-injury phobia and situational phobias. Most of the phobias have onset during childhood. Blood-Injection-Injury (BII) phobia is a debilitating disorder of significant importance in paediatric practice. If it is not managed scientifically during childhood, it can lead to severe emotional disorders during adulthood.

The lifetime prevalence of BII phobia is 3.5%. The median age of onset is five and a half years.

There is high prevalence in females. There is significant comorbidity with obsessive-compulsive disorder, panic disorder and agoraphobia [4]. BII phobia also shows comorbidity with attention-deficit/hyperactivity disorder and various emotional problems in children and adolescents [5]. There is high comorbidity of depression in individuals with BII phobia [6]. Hence, blood injection injury phobia should be identified early and managed effectively during early childhood.

### **Clinical Features**

Children with BII phobia have intense fear of blood, injury, injection/needles. Symptoms usually start in early childhood. They experience uncontrollable fear on exposure to the phobic stimuli. These children will do everything possible to avoid it. Crying, clinging and tantrums are usually seen in children with this phobia and they avoid most of the medical procedures. Tachycardia, hypertension, chest discomfort, tremors or feeling of choking may occur even on mentioning about blood, needles or any injury. Vasovagal fainting usually occurs in children with BII phobias. Diphasic cardiovascular response is seen in BII phobia [6]. This pattern is seen in up to 20% of BII phobia patients [7]. Initially, a brief increase in heart rate occurs. This is followed by bradycardia and hypotension. This in turn leads to vasovagal syncope [8]. Most of the patients with BII phobia experience syncope or presyncope as part of the response to phobia. They have an underlying autonomic dysregulation. This will predispose to syncope [9]. Exaggerated inhibition of sympathetic nerve activity is a predisposing factor for syncope [10]. Reduced medial prefrontal cortex activity is seen in BII phobia. This leads to reduction in cognitive control of emotions [11]. Emotional problems mediate fainting responses in BII phobias [12].

BII phobia include fear of blood (hemophobia), injury phobia (traumatophobia) and fear of receiving an injection (trypanophobia) [13]. The most common painful needle procedure which a person experiences in life is vaccine injection. Individuals with high level of fear during vaccination will have significant distress associated with subsequent needle procedures [14]. Because of the fear of medical services, children with this strong phobia will refuse the treatment for many diseases.

### **Treatment**

The treatment goal is eventual extinction of the phobic symptoms. In the management of childhood anxiety, coping skills and self-esteem of the child should be improved. The therapy should be aimed to make changes in the child's perception of dangerousness. Cognitive Behaviour Therapy (CBT) is commonly used in the treatment of specific phobias. A variant of cognitive-behavioural therapy, which includes in vivo exposure, psychoeducation, cognitive challenges and skills training is effective in the management of specific phobias in children [3]. Coping skills of children should be increased and self-efficacy should be improved. Exposure therapy reduces the hyperactivation of amygdala and anterior cingulate cortex which is found in individuals with specific phobia.

The recommended treatment for children seven years and older with injection phobia is in vivo exposure-based therapy [15]. For children above seven years, who are reluctant to undergo in vivo exposure, non-in vivo exposure is recommended. Exposure-based interventions are also beneficial for children less than seven years. Scientific management of needle fear will lead to improved compliance in health care. Thus health outcomes in children can definitely be made better.

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