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CASE REPORT

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Childhood masturbation simulating epileptic seizures: A report of two cases and review of the literature

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Abstract *Background:* Childhood masturbation (self-gratification) may mimic epileptic seizures, and is regarded as one of paroxysmal non-epileptic disorders in children, which incorporate several potential diagnoses. It is characterized by self-stimulation of the genitalia, associated with unusual postures and movements which could be mistaken for seizures. If not recognized, childhood masturbation could pose diagnostic difficulties, unnecessary investigative spending and considerable parental anxiety.
Aim: To highlight two cases of childhood female masturbation simulating epileptic seizures
Design: Descriptive report of clinical presentation of two cases of child masturbation mimicking seizures
Conclusion: There is need for high index of suspicion in order to diagnose cases of childhood masturbation which may be confused with epileptic seizures. Home video recording of the events is very helpful in making timely diagnosis; so that unnecessary investigations and treatment is avoided.

Key words: childhood masturbation, non-epileptic disorder, seizure mimics

Introduction

Developmental studies have shown that masturbation (self-gratification) is common in infancy and childhood,[1,2] and was first reported by Still in 1909. It is characterized by self-stimulation of the genitalia, associated with unusual postures and movements which could be mistaken for seizures. Childhood masturbation is regarded as one of the paroxysmal, non-epileptic disorders in children, which incorporate several potential diagnoses. Therefore, if not recognized, it could pose diagnostic difficulties, unnecessary investigative spending and considerable parental anxiety.[3]
There is paucity of information on childhood masturbation simulating epileptic seizures in our environment, and to the best of our knowledge; this report is the first from this area. Two cases of childhood female masturbation that were referred to our clinic as 'seizure disorders' are highlighted.

Case 1

ZMG, a 6year old nursery 2 female pupil was referred from a private clinic as a case of seizure disorder with poor response to anticonvulsant treatment. Her abnormal body movement (thought to be convulsions) started at age of 7months. The "convulsion" was described as abnormal movement of the limbs and trunk, occurring mainly while lying down, associated with repeated flexion and extension of the lower limbs. No history of sudden fall to the ground during any of the episodes, no facial twitching or staring gaze and no impairment of consciousness. Child would leave the family to find a separate place to lie whenever the episode is about to occur. Of recent, child would look for a towel/piece of cloth that she rubs over the genital region during the episodes. She was having 2-3 episodes per week initially, but the frequency progressively increased to 2-3 episodes per day at the time of presentation.
Mother is uncertain if episodes occur in school, but there was no report of such from the teachers. She has been on traditional interventions including exorcisms without significant change. She was subsequently taken to the referring private clinic where she was placed on carbamazepine anticonvulsant for some weeks with no clinical benefit.
On presentation at our Paediatric Neurology clinic, further evaluation revealed normal neurodevelopmental history and normal clinical examination including anthropometry. Investigations done included electroencephalograph (EEG), serum electrolytes including sodium, potassium, chloride, calcium, magnesium and phosphate were all within normal limit.

Due to poor response to the increasing doses of the anticonvulsant (carbamazepine) for up to 9-weeks, the

mother was asked to take a home video recording of the episode for further consideration of the 'seizure type.'
Five minute-video-play of the event revealed child in prone position having rocking movement of the pelvis, with a piece of cloth in her hands being rubbed over the genital area and repeated flexion of the lower limbs. She responded to the mother's call and could be distracted by the mother during the recorded episode.
A diagnosis of childhood masturbation mimicking epileptic seizures was made. Parent was counseled on the harmless nature of the behavior and was advised on behavior modification in form of distraction of child's attention when the attacks are about to occur.
Carbamazepine therapy was gradually withdrawn. However, the patient was lost to follow up after withdrawal of carbamazepine therapy.

Case 2

RG, a 3year old female, was referred from the Family medicine Department of our Hospital, with a 2-year history of abnormal stretching of the limbs. Further inquiry revealed that episodes occur in recumbent position, with unusual side to side pelvic movement, grunting and facial flushing during the episodes. No impairment of consciousness and child responds to, and can be distracted temporarily during the episodes. Frequency of the episodes was 3-4 times per week. Child knows when the episode is "about to come" and would find a place to "lean." Parents have used various traditional medications and spiritual healing with no improvement. She had normal developmental history and unremarkable clinical examination. Investigations done before the referral were unremarkable, including serum electrolytes, calcium and EEG. A video recording of the episode brought by the parents, showed the child in prone position, with abnormal side to side pelvic movement, repeated flexion and extension the lower limbs with the hands stocked in between the thighs.
A diagnosis of childhood masturbation was made following the clinical history and observation of the video recording of the episode. Parents were counseled about the behavior, being a normal developmental process, and were advised on behavioral modification/ distraction of child's attention. She was reviewed six-weeks later, frequency of the episodes was said to have reduced to 2-3 times per week. Some intended masturbation episodes were interrupted by distracting child's attention as advised. Patient was subsequently lost to follow-up.

Discussion

Childhood masturbation; though a normal developmental process may be of medical significance when it is mistaken for other diagnoses including epilepsy, movement disorders or other medical conditions like abdominal pain.[4,5] Masturbation also becomes a psychopathological disorder if it becomes a compulsion beyond the child's willful control or is occurring excessively and in public, open places which usually connotes significant emotional disturbance in the subject.[2]
In Africa and other sexually conservative regions where masturbation may be regarded as a taboo,[6] childhood masturbation may be associated with parental anxiety and feelings of shame and embarrassment.[3,7] This may predispose the child to maltreatment, parental aggression or physical abuse including spanking.[6] Some of the reported consequences from socio-cultural practices include female genital mutilation/cutting, with the aim of reducing the child's sexual desire so as to prevent the development of sexual promiscuity later in life.[6] Other forms of family or public response to childhood masturbation has not been well documented as there is sparse literature available regarding masturbatory behavior as a whole.[5]

Predisposing factors to childhood masturbation are still controversial, poorly understood and less well studied.[3,8,9] However, speculations as to how children learn to masturbate have been proffered. Just as infants learn to explore the functions of their fingers and mouth, they do the same with their genitalia.[2] They discover that touching some areas (like the genitalia) is pleasurable and are motivated to touch those areas more often.[10] Child masturbation may be viewed in the same way as thumb-sucking or other behaviors that infants use to enhance comfort.[5] Younger children do not attach sexual thoughts to the act of masturbation but are simply doing what feels good, providing them with comfort.[11] This explanation may be reassuring to some parents who are alarmed by the child's behavior.
Perineal irritation was also thought as a predisposing factor for child masturbation, but the exact relationship is unclear. However, perineal irritation/itching may intensify the behavior and increase its frequency.[5] Also, child masturbation may be associated with physical or emotional stress in form of boredom or lack of stimulation, as contributing factors.[8] Masturbation has been shown to occur more often in children who are deprived in tactile stimulation. Franić *et al.*[7] have demonstrated this fact in a girl who was born nine-months after her older sister. Her pregnancy was unwanted and she was breastfed for a short period of time (less than a month). The child developed infantile masturbation which disappeared during a four-week period in which she suffered chicken pox. In that period, the child was more frequently in contact with her mother because of treatment with potassium permanganate baths and consequently more tactically stimulated.[7]

There is female preponderance of cases of child masturbation which may justify a hypothetical conjecture that it may be hormone related, perhaps postnatal withdrawal of maternal hormones.[9] Thus, Ajlouni *et al.*[3] studied sex hormones and clinical profiles of thirteen masturbating infants and young children where they found comparable levels of all sex hormones with the control group, except oestradiol, which was significantly lower among the case group. However, oestradiol, being the most important of the oestrogen hormones that stimulate

sexual development in females, would rather be expected to be high. Therefore, the low levels found by Ajlouni *et al.* do not seem to explain masturbatory behavior in these children. Hence, in line with the authors conclusion,[3] further studies are needed to substantiate this finding.

Masturbation may occasionally be a manifestation of sexual abuse in a child.[1] Some indicators to the possibility of sexual exposure may be suggested if the child is suspected to be taught to masturbate by someone, or the child tries to stimulate other children or continues to masturbate in public. When children report being sexually abused, there is a high likelihood that it is true, because young children rarely make false accusations. Therefore, a search for evidence of sexual abuse or other abnormalities in the genital area; by external genital examination should be carried out. This is particularly important in view of the rising ugly trend of child sexual assault/abuse in different communities. Due to frequent initial misdiagnosis of masturbation in young children, a lot of investigative spending, extensive diagnostic work-up and unnecessary drug prescriptions may occur (as in the first case report), before the final diagnosis is often made. Therefore, particular emphasis should be paid to detailed history taking, high index of suspicion and observation of the abnormal events (which may be in form of video-recording) whenever possible. Important clues to the diagnosis of childhood masturbation includes normal EEG between or during the attacks, lack of response to antiepileptic medication and careful reviewing of videotape recording of the events.[10,12]

As these behaviors are a normal occurrence in child development, interpretation, reassurance and behavioral modification are the keys in management of the child and the family.[10,12] The events usually disappear with time, without any drug treatment.[9] Distraction/ redirection can be helpful while the child is attempting to masturbate, by engaging the child's interest in other objects or activities away from the behavior. The spectrum of distraction strategies includes playing with the child, carrying the child or offering different toys of interest, in various combinations. Since boredom and parental inattention are some of the risk factors considered for masturbation in younger children, parents should spend enough time with the child, hugging and cuddling the child as necessary. Most children will stop the behavior over time if they are appropriately supervised, mildly restricted/redirected and are praised for appropriate behavior. There is also the need for more understanding of infant and child sexuality issues, so that child sexuality would be viewed as a normal developmental process.

Conclusion

There is need for high index of suspicion in order to diagnose cases of childhood masturbation which are commonly misdiagnosed as 'seizures' or movement disorders. Home video-recording of the events is very helpful in making timely diagnosis, so that unnecessary investigations and treatment is avoided.

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