

# Seizure in a female infant

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## Abstract

The authors report a case of epilepsy presented as infantile masturbation. The patient was a 3-year-old girl with paroxysmal attacks of masturbation mimicking seizures. Her physical examination was completely normal, with no other neurological problems, although her EEG showed abnormal changes. By administration of anticonvulsant, the number of attacks reduced primarily and with the increment of the dose, subsided totally.

**Keywords:** Seizure; Masturbation; Infant

## Introduction

A 3-year-old girl had recurrent episodes of body stiffening from age one, lying down in prone position with adducted thighs, stiffened trunk and sweating. During the attacks, she was awake but staring with no attention to her surroundings. At the end of the episodes, she suddenly became floppy, with no clonic movements, discoloration, eye deviation or incontinence during the attacks. Initially, the episodes repeated up to 20-30 times daily and each episode lasted about 2 minutes. The patient was completely asymptomatic between the episodes. She was born by cesarean section with a normal APGAR score and weighed 3 kg. Her physical examination was entirely normal with no signs of neurodevelopmental deficit. The first EEG done at the onset of the disorder showed generalized paroxysmal high voltage slow waves. Treatment started with carbamazepin and resulted in reduction of both frequency and length of episodes. By addition of primidone, the rate of attacks declined further. Finally, valproic acid was substituted for carbamazepin and the episodes ceased totally. In two occasions, the seizures recurred due to the parents' refusal to continue medications and subsided again after the re-establishment of the treatment. Since then, she has been asymptomatic. The second EEG, done 5 years after the first one, showed scattered sharp waves.

## Discussion

Recurrent paroxysmal events in children involve a wide range of differential diagnoses. Neurological and cardiac disorders are the most important contributing factors. Proper diagnosis is essential, and appropriate investigations and specific therapy might be required.<sup>1</sup> Infantile self-stimulation should always be considered in the differential diagnosis of "strange episodes or attacks".<sup>2</sup> The term "masturbation" is derived from the Latin words "manus", meaning hand and "stupratio", meaning defilement.<sup>3</sup> Masturbation occurs at all ages and in most cases it is considered a normal behavior,<sup>4</sup> occurring in 90-94% of males and 50-60% of females at some time in their lives.<sup>5</sup> Gratification disorder, so-called infantile masturbation, is an important consideration in the differential diagnosis of paroxysmal events in early childhood<sup>3</sup> and it has been mistaken for epilepsy,<sup>6,7</sup> abdominal pain<sup>8</sup> and paroxysmal dystonia or dyskinesia.<sup>9</sup> Masturbatory activity in infants and young children is difficult to recognize because it does not often involve manual stimulation of the genitalia at all, possibly leading to unnecessary investigations and treatment in girls.<sup>10</sup> This condition occurs at any age, the youngest reported child being 2 months old, but has also been reported in a male fetus by ultrasound.<sup>11</sup> In young girls, tightening of the thighs, rocking pelvic movements or other rhythmic activities, mechanical pressure application in suprapubic area, accompanied by grunting, facial flushing, irregular breathing, and sweating are the presenting features which might be misinterpreted as abdominal pain or urinary symptoms.<sup>10</sup> The

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Received: April 16, 2007 Accepted: October 28, 2007

association with a vacant and glassy stare, accompanied by rigidity, grunting or rocking movements may suggest epileptic seizures.<sup>10</sup> A detailed history is essential and personal observation of these episodes helps to confirm the diagnosis.<sup>1</sup> Videotaping the episodes by the parents is also very helpful for the diagnosis and contributes to the management of this condition.<sup>2</sup> Masturbation is not so uncommon and treatment mostly involves reassuring the parents.<sup>4</sup> Few data are available on the clinical outcome of childhood masturbation, but most children seem to develop normally.<sup>4</sup> As in adults, complex partial seizures in children can be difficult to distinguish from certain behaviors.<sup>12</sup> Some other recurrent non-epileptic events, other than masturbation, seen in children can be mistaken for seizures, including shuddering attacks, paroxysmal vertigo, breath-holding

spells, cardiogenic syncope, night terrors, and movement disorders, such as paroxysmal kinesigenic choreoathetosis.<sup>12</sup> EEG should be performed in any child who is suspected of having partial seizures. If there are focal spikes or sharp waves, then there is strong supportive evidence for a diagnosis of partial seizures in the proper clinical setting. It should be remembered, however, that a normal routine EEG cannot be used to "rule out" a diagnosis of epilepsy in patients with episodes that sound like simple or complex partial seizures.<sup>13</sup> In medical literature, there are reports of infantile masturbation misdiagnosed as epilepsy but we did not find any reverse condition report. In our patient, EEG abnormality, improvement of attacks by anticonvulsant therapy, and return of seizures after discontinuing the drugs implies that the proper diagnosis is epilepsy.

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