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**NON-EPILEPTIC PAROXYSMAL EVENTS IN CHILDREN:  
STRUCTURE AND PHENOMENOLOGY. III. MASTURBATION**

**Abstract.** The present research continues the description of non-epileptic paroxysmal events (NEPE) emerging in early childhood and confusing the parents, pedagogues and doctors due to their unusual manifestation. Masturbation has been studied for many centuries and has been subject to controversial interpretation in various religious confessions and medical, psychological and pedagogical schools. The authors have studied the incidence of complaints about NEPE at the specialized neurological department of the city children's hospital in 2016-2017. The state of 57 children (18.7 %) out of 500 toddlers hospitalized with various paroxysmal disorders of consciousness and movements was diagnosed as NEPE. The phenomenon of masturbation widespread in the general population was diagnosed in the hospital in only three children. Masturbation (or benign idiopathic infantile dyskinesia) had a specific clinical but uniform enough neurophysiological manifestation in the children under observation (domination of the theta rhythm with the amplitude of about 80 mV without zonal differences and epileptiform activity). The article discusses the question of semantic unity of conscious and subconscious masturbation and the expediency of using this term with reference to the children at an early age. The authors suggest using the term "benign idiopathic infantile dyskinesia" to denote the state under consideration for specifically psychological and social reasons.

**Keywords:** non-epileptic paroxysmal events; masturbation; motor acts; pediatrics; infantile dyskinesia; neuro-physiological disorders.

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A significant place among non-epileptic paroxysmal events is occupied by the phenomena that do not only have a narrow medical and pedagogical interest but have also acquired special historical and social significance over many centuries of observation. A certain part of them have been referred to as “bad habits” and behavioral deviations (this concerns, first of all, finger sucking and masturbation). The phenomenon of masturbation is characterized by a multitude of controversial interpretations. The term “masturbation” originates from the Latin words “manus” – *hand*, and “stupraccio” – *desecration*.

Masturbation has been known from ancient times and has been given different descriptions and

interpretations in fiction and in religious, anthropological and medical literature. Most religious denominations forbid masturbation.

In Judaism, it is a deadly sin, because, according to Torah, it is forbidden to discharge semen in vain. In Christianity, masturbation is also considered to be a sin, which has its origin in a Biblical story about Onan who was punished with death for “spilling his semen on the ground” (Genesis 38:9). The sinful nature of masturbation is reflected in the deuterocanonical books of the Old Testament (specifically, in the Wisdom of Solomon) and in the First Epistle of Paul the Apostle to the Corinthians (1 Cor. 6:9). In the Orthodox tradition, masturbation, or malakia, is referred to the “sins against oneself” equal to same-sex

sexual intercourse (unnatural fornication), which is most vividly shown in the writings of Saint Ignatius (Brianchaninov) and Saint Theophan the Recluse (Zatvornik). Masturbation (istimna) is also forbidden in Islam.

Nevertheless, in the Middle Ages and Renaissance, there was tolerable attitude to children's masturbation because it was believed that the child could not control himself.

Intolerance to masturbation got a new impulse in the 18<sup>th</sup> century, after the publication of the work by a Swiss doctor Samuel Auguste André David Tissot "Onanism", the author of which believed that loss of semen from the body in great amounts would cause migraine, seizures and brain tissue reduction. Numerous publications of this book formed "onanophobia" in European countries at that time.

In his lectures in the Collège de France in 1974-1975, one of the leading contemporary French philosophers Michel Foucault argued that in the late 18<sup>th</sup> – early 19<sup>th</sup> centuries, there formed the ideas about abnormal personalities: human monster, incorrigible individual and child-masturbator. The field of emergence of the child-masturbator is the family, and in a more narrow sense – the bed, the body, the family as witnesses and the doctor. Considered as universal, masturbation practice is closed, or hardly admitted, i.e. such a practice that is not

spoken about. Masturbation is a common secret, shared by all but confessed by no one. "Practically no one knows about what is done by practically everyone" (M. Foucault, 2004 [4]).

E. Holt [*see*: 1] notes that the worst children's habits are finger sucking, nail biting, bedwetting and masturbation. Fight against masturbation has led to serious changes in the family and social everyday life: separate bed, special clothes and toys, diet, special furniture.

In the mid 19<sup>th</sup> century, some enterprises began to produce and sell remedies for masturbation (cornflakes, rectangular crackers). Bestsellers about terrible diseases in store for masturbators were published. The parents were advised to bandage the children's genitals, put them in cages, tie up their hands, and subject boys to circumcision without anesthesia. During this period, special anti-masturbation devices (bandages) were invented and produced. Intensive exercise, sleep on a hard wooden bed and diet (little meat and a lot of cereal) were suggested as preventive measures [2].

As different from foreign doctors, Russian specialists displayed a tolerable attitude towards children's masturbation, called it a "baby sin" and believed that only in adults it could be looked upon as disorder.

A. K. Leung and W. Robson, in their co-authored work (1993) expressed an opinion that masturba-

tion is registered in almost 90-94% of boys and 50-60% of girls. True revealability of this phenomenon is not clear because it is not identified by family members and caregivers when the actions are not connected with genitals, which happens not infrequently [7; 6; 1].

Home video recording is necessary in order to prove the presence of masturbation. 31 cases of masturbation (11 boys and 20 girls) were registered and detailed on the basis of the data obtained in a Glasgow outpatient clinic in the period from 1972 to 2002 [8]. The usual sources of information about masturbation include differential diagnostics of paroxysmal events in children allowing specialists to single out a group of children with this phenomenon on the basis of complex examination. Such cases were described by a team of researchers including M. L. Yang in 2005; according to this publication [10], 12 girls with masturbation, examined in connection with unusual dystonic attacks were revealed in several children's hospitals of various states of the USA.

The onset of masturbation falls on a broad age-range from 3 months to 5.5 years. The average onset age of masturbation is 12.5 months. The time of diagnosing this phenomenon as masturbation varies from 5 months to 8 years (on average about 2 years). On average, masturbation episodes take place daily

(varying from once a week to 12 times a day) and last from 30 seconds to 2 hours (on average 2.5 minutes). The situation and the baby's position in which masturbation begins may vary, but in 11 children, this disorder was revealed when they were in a special child car seat. Masturbation was also registered during sleep, in walkers, in a high chair, while lying on the floor, changing diapers, and defecation. In some cases masturbation began when the children were tired. Masturbation episodes are stereotypical in character, but vary in length. They are usually accompanied by quiet moaning vocalizations, reddening and sweating of the face, tension of the perineal group of muscles with a typical position of the lower limbs, turning, sculpture postures, and are characterized by preservation of consciousness and end in relaxation. In some situations, masturbation leads to the baby's exhaustion and fatigue, sometimes it makes him sleepy. There descriptions of episodes with cyanosis, paleness, steadfast gaze, trembling, giggling, and fright. Physical examination and laboratory tests reveal no deviations in such babies [8; 10].

In its marked form, from an evolutionary event, masturbation turns into a pathological phenomenon and may cause lengthy excitation, behavioral disorders, impairment of interfamily relations, relationships

with the peers and formation of self-consciousness, and development of sexual perversions. This approach dominates among psychologists, sexologists and psychotherapists.

At present, specialists distinguish masturbation as conscious self-stimulation and infantile masturbation, the onset age of which can hardly allow regarding it as “a conscious act”, and which is denoted in the English language literature as *gratification* (the state of being pleased or satisfied). Gratification consists in reiterating rhythmic movements of the limbs, especially hip adduction, accompanied by additional removed movements or change of facial expression [9]. The given form of masturbation can disguise abdominal pains, paroxysmal dystonia or dyskinesia. It is especially difficult to differentiate this kind of state in cases when the genitals are not touched. In English speaking countries, the parents prefer the term and diagnosis of “gratification” or “benign idiopathic infantile dyskinesia” to “masturbation” due to salient social and psychological reasons [ibid.].

The aim of our research is to determine the role of masturbation in the structure of non-epileptic paroxysmal events in children under the conditions of a specialized hospital.

#### **Materials and Methods**

Over the period from January 1, 2016 to December 31, 2017,

500 children up to 3 years of age were admitted to the neurological department of the City Children’s Hospital of Saint Olga (Saint Petersburg) with paroxysmal consciousness and movement disorders. All children were tested with the help of generally accepted schemes of somatic, neurological, and ultrasonographic examination. Electroencephalography was carried out on “Mitsar-EEG-201” according to the standard procedure during wakefulness using age-related functional tests. Video EEG was carried out on “Mitsar-EEG-201” in the functional diagnostics room, and on the base of Dr. Berezin's Diagnostic and Treatment Center *International Institute of Biological Systems*.

#### **Results**

On the basis of our observation, the disorder was diagnosed as epilepsy, epileptic encephalopathy, or singular epileptic attack that took place for the first time in the child’s life in 302 children. In 198 children no data corroborating epilepsy were found at the time of examination. This number included children with non-epileptic paroxysmal events (NEPE), neurotic disorders (tic hyperkinesias), situationally bound paroxysmal events, as well as manifestations of perinatal hypoxic ischemic brain lesions in the form of pathologic paroxysmal movements and torso dystonias. From among all cases, we have singled out 56 children satisfying the NEPE

criteria. The general information about the children under examination is presented in Table 1.

The structure of the diagnosed NEPE is presented in Table 2.

**Table 1.** Characteristics of children with NEPE

Parameter		M ( $X_{min.} - X_{max.}$ )
Sex	boys	25.0
	girls	31.0
Gestational age, months		38.7 (29—42)
Postnatal age, months		8.6 (1—36)
Optimality of the course of pregnancy, %		83.1 (70—94)
Optimality of the course of birth, %		81.9 (61—100)
The Apgar score	1'	7.25 (1—9)
	5'	8.1 (4—9)

**Table 2.** Character of paroxysmal consciousness and movement disorders in children under observation

Character of paroxysmal disorders	n	Percentage, %
NEPE differentiated into:	34	60.7
– breath-holding spells	6	10.7
– Fejerman syndrome	6	10.7
– benign paroxysmal eye phenomena	5	8.9
– benign paroxysmal torticollis (retrocollis)	5	8.9
– benign nocturnal alternating hemiplegia	1	1.7
– mild hyperekplexia	2	3.5
– <b>masturbation</b>	<b>3</b>	<b>5.3</b>
– benign sleep myoclonus	1	1.7
– spasmus nutans	1	1.7
– sleep apnea	1	1.7
– paroxysmal dystonia attacks of the body	1	1.7
– startle response	1	1.7
– oral automatisms	1	1.7
Undifferentiated NEPE	22	39.2

The research results showed that 23.2% of children with paroxysmal disorders typified as NEPE did not have neurological deviations; the other infants demonstrated various

causal deviations of the neurological status; 14.3% of children had multiple deviations. Neurovisualization showed normal brain structure in the majority of children (55.4 %);

mild brain ventricular expansion was predominant among the deviations observed (21.4 %).

Neurophysiological examination revealed normal indicators of routine EEG and/or video-EEG monitoring in 54 cases (96.4 %); two children showed delay of bioelectrical activity formation.

In the structure of NEPE, masturbation (benign idiopathic infantile dyskinesia) was diagnosed in 3 children (5.3%).

The clinical features of the course of benign idiopathic infantile dyskinesia are given in Table 3.

**Table 3.** Characteristics of the course of benign idiopathic infantile dyskinesia in children under observation

Parameters	Boy E. (3 months old)	Girl K (2.5 years old)	Boy M (2.5 years old)
The Apgar score, points			
1'	7	8	8
5'	9	9	8
Manifestation	Paroxysms in the form of forced inhalation with a short breath-hold and tonic tension of the limbs without losing consciousness, duration up to several seconds, up to 10 times a day	Tonic tension of the hip and abdominal muscles with a fixed gaze without losing consciousness, duration up to 10-15 seconds	Tonic tension of the lower limbs lasting up to 20 seconds, in series up to 1.5 hours twice a day before sleep, accompanied by marked sweating of the scalp
Development	In accordance with age	Psycho-motor underdevelopment	In accordance with age
Accompanying diseases	None	Epilepsy	None
Neurovisualization	Neurosonography: normal	Magnetic resonance imaging of the brain: without pathology	CT scan of the brain: retrocerebellar cyst (clinically insignificant)
EEG, video EEG	Theta rhythm with the frequency of 3-4 Hz and amplitude up to 80 mV is registered on the EEG. Zonal differences are preserved. Pathological activity is not registered.	Dominant theta rhythm with the frequency up to 5 Hz and amplitude of 70-80 mV is combined with runs of high amplitude delta waves registered on front leads. Zonal differences are preserved. Occipital gradient is poorly expressed. Epileptiform activity is not registered.	Video EEG monitoring with paroxysmal events recording: theta rhythm with the frequency of 5-6 Hz combined with runs of high amplitude delta-like activity in posterior brain is recorded on the EEG. Zonal differences are preserved.

Parameters	Boy E. (3 months old)	Girl K (2.5 years old)	Boy M (2.5 years old)
			Occipital gradient is expressed. Epileptiform activity is not registered. <b>Note:</b> During recording, the child demonstrated regular paroxysms (crossing hips and raising legs accompanied by abdominal muscles tension and sweating) without accompanying pathological electrographic pattern.
Therapy	Elcar	Depakine, Keppra	Phenybutum

It is seen from the table that masturbation in children under observation had various manifestations on a similar neurophysiological background.

### Conclusion

The phenomenon under consideration has a dramatic history of research. Being a widespread disorder (according to Doctor Oscar Berger, 99% of men and women masturbate, the remaining 1% conceal the truth [see: 1]), this phenomenon is still characterized by controversial interpretations. It is not conceptually clear whether conscious masturbation of senior children and adults and unconscious masturbation of infants are one and the same phenomenon. In this connection, and for ethical and psychological considerations, it is more correct to use the term “benign idiopathic infantile dyskinesia”, as

long as there is no Russian term analogous to “gratification” in English.

It should be noted that it is difficult to determine the true incidence of benign idiopathic infantile dyskinesia because it is not always revealed and/or reported by the parents and the medical and pedagogical staff.

It is worthwhile mentioning the opinion of M. Foucault (2004) [4] once again that masturbation is a common secret shared by all. In the present research held under the conditions of a specialized hospital, it totaled to 5.3% of NEPE and to 0.6% of all paroxysmal disorders of consciousness and movements. Nevertheless, the words of Sigmund Freud (1915) are still urgent: “We are unanimous in the opinion that the theme of onanism is absolutely inexhaustible” [as cited in: 3].



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