DIMINUTIVE VISUAL HALLUCINATIONS IN MIDDLE-AGED WOMEN DURING THE INVOLUTIONAL PERIOD

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The psycho-sensorial disorder which I am about to describe presents some interesting features, although difficult of interpretation. It consists of visual hallucinations the character of which lies in markedly diminished dimensions of beings or objects with integrity of their relative proportions. The perception of the diminished size has reference exclusively to the objects of the hallucination but not to the surrounding objects, which remain unaltered to the hallucinating individual. Total consciousness of the hallucinations is characteristic.

The literature on this subject is very meager. Since 1832 there have been very few scattered observations. In that year Macnish in his book on the Philosophy of Sleep mentions an interesting case of a man who during convalescence from an attack of cholera saw diminutive beings of three feet height dressed in picturesque costumes. As he gradually regained his health, the objects appeared smaller and smaller and less frequently. One night while he was sitting all alone at the table they appeared before him and danced on his table. Being very much annoyed, he then suddenly struck the table with his fist and cried out: "Get away from here at once, you little devils." The hallucinations disappeared and never returned.

The next record we find in Leuret's work of 1834, entitled "Fragments philosophiques sur la folie." His case was taken from an old ecclesiastical book: The devil came at night and knocked on the door of Father Macaire asking him to get up and to join other priests in night prayers. At once he went in the church, where he commenced to pray to the Lord. Suddenly he saw a multitude of diminutive Ethiopians running through the church around the priests, who remained seated; one made a priest go to sleep by pressing his eyeballs; another put a finger in a priest's mouth to make him yawn; others placed themselves on the neck and shoulders

of the priests; others turned into women. Father Macaire, praying to the Lord, speaks of his soul filled with illusions. Brierre de Boismont in his book on Hallucinations in 1852 reports several cases. In one the patient saw around his great toe Tartars, Roumanians and Turks fighting against each other. In another case the patient having fever and headaches saw a crowd of small human figures all of the same size and placed at the same distance. When one of these figures vanished, immediately another took its place. Having no delirium the patient was able to make a correct observation of his hallucinations. The same author speaks of several aged women suffering from senile dementia who could see thousands of little children around them. The following four cases came under my observation:

CASE I. Mrs. M. S., aged forty-five, complained of vague nervous disturbances of a functional nature. She first consulted a gynecologist, who advised removal of the uterus and ovaries. This was done. The operation aggravated her condition and from that time on she had at various intervals paroxysms of major hysteria. Although she recovered from the surgical procedure, she never left her bed for six months. She then presented in addition to the above attacks of hysterical outbreaks also vague pain all over the body, headache, marked insomnia and anorexia. At times she would become slightly confused, but the latter state would soon disappear. During the last four months she developed visual hallucinations of a peculiar character. At first only in the evening and later at any time during the day but always preceding and following a hysterical paroxysm she would see a great many little children filling the room, laughing and chatting with each other. Some of them would climb on her bed and come closer and closer to her until she felt their little hands around her neck. At that moment she would scream and enter the semiconscious state of her hysterical paroxysm in which she threw her arms in various directions and raised her body in a condition of opisthotonos. As soon as consciousness had been regained, she would see the little figures again but gradually moving away from her at longer and longer distance until they became invisible. These images appeared also without an accompanying hysterical paroxysm, but then they would only remain in the room and sit on the bed without approaching her neck. The patient was not delusional. During the intervals between the paroxysms she frequently discussed her hallucinations. She realized the absurdity of the visions, laughed at them, ridiculed them. She insisted, however, on explanations; she wished to know the *raison d'être* of the images of little human beings. She was anxious to know why adults did not appear, but only children. At no time did she fear the apparitions and finally she accepted them as inevitable and ceased to find explanations. Even then she was not delusional, as she assured her physician and myself that they would eventually disap-

pear, as there was "nothing to it" to use her own expression. Later she made a complete recovery. She remembers now those hallucinations and frequently refers to them in her conversations.

CASE II. Mrs. C. M., aged fifty-eight, presented at various intervals during a period of several years a neurasthenic symptom-group from which she had never recovered. During the last two attacks, which lasted two and four months respectively, she had visual hallucinations of the following character: While she was in bed late in the afternoon she would notice men and women crowding her room and standing around her bed. In whichever direction she would turn her head she saw them standing and looking at her. What particularly astonished her was their sizes and dimensions. They all appeared to her exceedingly small in stature and in individual features, although they were all adults and some of them of middle age. In spite of their size the parts of their bodies were all in proportion to each other. When she stretched out her hands to reach them and touch them, they would promptly recede. Once she got out of bed to catch them, but the further she went after them, the further they moved away from her and when she returned to bed she found them all standing at each side at the foot and head of the bed. The hallucinations would last about 30 minutes and then suddenly disappear. The patient fully appreciated their unreality, spoke of them frequently to everybody and was convinced of the fact that they would disappear. After having had experience during one period of her breakdown and remembering that the hallucinations then disappeared she was fully convinced this time that they were only temporary and without any special consequence. At no time was the patient delusional.

CASE III. Mrs. A. K., aged forty-one, having had at thirty-five double oöphorectomy, was suffering from attacks of petit mal for the last ten years. At forty she had a gastro-intestinal disorder with a prolonged diarrhea during a period of two months. At that time while in bed she developed visual hallucinations. Every object and human being in the room appeared to her of extremely small size, not larger, she said, than that of a man's finger. Besides, there were also a great many unfamiliar people whom she never met before and who were also of the same diminutive size. The most interesting feature of these hallucinations is their sudden onset and sudden disappearance. All at once she would see everything and everybody, also strange bodies, in a very small size. As the woman suffered from petit mal, the sudden appearance of the images suggested the possibility of a psychic equivalent. However the duration of the vision was not that of epilepsy, as each hallucinatory attack lasted at least thirty minutes and a few of them two hours. Besides, she remembered them and she was perfectly conscious of their unreality, as she frequently criticized them. Her constant solicitude was to know why the visions appeared at all and why in such ridiculous shape. As she was very intelligent and observant she called attention to the fact that the hallucinations would occur after an exceptionally profuse attack of diarrhea. The condition lasted as long as the intestinal disorder.

CASE IV. Mrs. K. S., aged fifty, widow, psychasthenic, having presented formerly at various times obsessive phenomena, developed at the age of forty-eight periods of depression. She recovered from each attack. At no time was she delusional. During the last attack of depression, which lasted longer than the others, for the first time she presented hallucinations—both auditory and visual. In the latter she saw strange adult people of an unusually small size. They were all men and appeared mostly towards evening and only when she was left alone in the room. Then they would crowd the room and around her bed; all wore the same clothing and of the same color, which was red; none of them had a hat on, and all had very few hairs on their heads. She heard them whispering unintelligible words, although of a pleasant nature. The visions would disappear as soon as someone would enter the patient's room. She fully realized the absurdity of the hallucinations, as she frequently spoke of them to all who visited her in the most critical manner. She was convinced of their unreality. She eventually recovered from the attack of depression and the hallucinations also disappeared.

The common characteristics of these four cases are: visual hallucinations of obsessive nature with preservation of consciousness; the objects of the hallucinations were of diminutive size; to some all objects appeared very small, to others the familiar people appeared normal and the visual images were made up of uncommon faces. Curiously enough the individuals of the images are all of the same size, of the same color, of same coverings, standing in the same positions and all doing the same act. Finally they all occurred in individuals of female sex and of middle age, during the involutional period of life.

The pathogenesis of this curious visual phenomenon presents difficulties for a proper interpretation. Under the name of micropsy has been described a manifestation in which familiar objects appear to be placed at long distance from the observer. Some writers observed at the same time diminution of their size. But this visual phenomenon cannot be placed in the category of hallucinations, as it refers exclusively to objects and beings which are actually in existence. When a real object appears to be placed far removed from the observer's eye, and appears of a different size, the inference is that there is some error either of accommodation or convergence or of both. Such is the view of Otto Veraguth, who in his work on Micropsy and Macropsy (*Deutsche Ztschr. f. Nervenheilk.*, 1903, Bd. 24) discusses the pathogenic mechanism of the visual disorder.

K. Heilbronner (*Deutsche Ztschr. f. Nervenheilk.*, 1904, B. 27) in his work on Mikropsie and Allied States bases his opinion on the occurrence of micropsy in epilepsy. He believes that the musculature of the eyes is not the original cause of the disorder, but the

cortex, and especially that portion of it which controls the muscular sense, including the muscles of the eyes. A toxin affecting that cortical area will produce micropsy. However simple the pathogenesis of micropsy may appear, the same can not be applied to hallucinations, as the latter is fundamentally different from the former. While the phenomenon of micropsy exists in connection with objects genuinely existing, the phenomenon of hallucinations has reference to objects not existing. While in the former phenomenon the objects preserve their mutual relation as to their individual size, shape, form and space, exactly as it occurs in reality, in the latter phenomenon there is a striking uniformity in all the objects and beings seen as to their color, size, shape, form and to their activities. The former is merely a visual illusion, a misplacement of objects actually seen, the latter is an abnormal visual phenomenon of objects never seen by the individual before.

In 1847 Sauvet described in the *Annales Médico-Psychologiques* a case of ether intoxication in which the individual for twenty minutes saw a diminutive woman dance before him on the piano cover. Similar observations were made in alcoholism, cocaineism, chloralism. de Clérambault observed it in tabetics, in paretics and in a blind paranoiac (*Ann. Médico-psychol.*, 1909). The four personal observations related above are particularly conspicuous by the conscious and obsessive character of the visual disorder, and they occurred in individuals free from psychoses. To apply to actual hallucinations the pathogenesis of disordered accommodation and convergence, viz., purely an ocular disorder as advanced by Veraguth (*loc. cit.*), will mean to identify hallucinations with micropsy. We have seen above that they are two different phenomena. The diminutive visual hallucinations may occur in non-delusional individuals as obsessive manifestations and in psychoses either as obsessive or non-obsessive phenomena. In the latter case they are either intimately associated with or form a part of delusional mentality.

When we attempt to determine the pathogenesis of this phenomenon we meet with some difficulty. In case it is obsessive, as it was in my four patients, its pathogenesis is to be determined from obsessions in general. In the subject under discussion we are dealing with a special variety of the obsessive hallucinations, namely with a uniformly diminutive size of the objects seen. Do we find or can we observe any relationship between the character of the hallucinations and the state of health or the age or the sex of my patients?

The first patient had paroxysms of major hysteria and the diminutive images appeared before her either preceding or following

an attack. In the second case the patient had several attacks of neurasthenia and in each of them the hallucinations were present. In the third case the patient had petit mal for ten years but the visual hallucinations occurred during a severe attack of a gastrointestinal disorder. In the fourth case there was a history of several attacks of depression and during the last attack, which was unusually prolonged, the hallucinations developed. A neurasthenic state, a gastro-intestinal disturbance, a prolonged depressive condition, all found in the last three cases, suggest strongly the possibility of a toxic state with the disappearance of which the hallucinations disappeared. The occurrence of hallucinations in conditions produced by internal or external toxic elements is a common and a very familiar picture. It does not, however, explain satisfactorily the reason of the peculiar character of the hallucinatory images. Why did the objects appear in the shape and size of extreme diminution, resembling children, why in such a number, why so uniform in diminution of size, why did they crowd the room and bed and why did all these children put their arms around the patients' necks?

In searching for an explanation one cannot accept merely the toxic doctrine alone, although toxicity was present. The latter must be considered as a factor which by reason of abnormal elements circulating in the bloodvessels of the cerebrum is capable of disturbing the psycho-sensory functions and the special sensorium in particular, thus producing visual or other hallucinations, but it fails to elucidate the nature and character of the false perceptions, such as for example in the phenomenon under discussion. We have seen above that a disturbance of accommodative and convergent power of the eye muscles may be applicable to the phenomenon of micropsy, in which actually existing objects appear far removed from the patients' eyes and therefore impress as being small, but they are not at all applicable to genuine hallucinatory manifestations, in which suddenly appear in a diminutive form objects and beings which did not exist before, while the surroundings remain in their natural relations to the patient. If a toxic metabolic state may play the rôle of a disturbing factor in the genesis of morbid manifestations in the sphere of special sensorium, it does not nevertheless throw any light on the origin of the elements composing the disorder. An effort in the field of psychological speculations is more directly indicated than an attempt in the realm of physiological inferences, such as intimated above.

In a contribution entitled "Obsessive Hallucinations in a Child and Psychoanalysis" (*Journal of Abnormal Psychology*, 1918) I ex-

pressed the view that visual images which arise in the sphere of the sensorium in a normal waking state and in dreams or in pathological states are but an exteriorization of the predominant subconscious complexes. The latter concern all our past experiences in the intellectual and sensory spheres which never totally disappear and which under the influence of some disturbing factor (from whatever source it may come) reach the conscious ego and assert themselves in fanciful picture formations, viz., hallucinations. The latter may be either an exact or an altered reproduction of more or less remote events which actually occurred in the life of the individual. Sometimes we observe only substitutions which apparently have no resemblance to the former events but a close analysis will reveal a genuine relationship between them.

In turning again our attention to the four cases one is struck by the occurrence of the special hallucinations in patients who are all females, all of whom are mothers and all of middle age. They were suffering at the time from metabolic disturbances, which, as we know, are apt to produce disorders in the psychic sphere, otherwise speaking they produce changes in the personality. When the latter takes place, the psychic activities controlled by the involuntary and passive cerebration are found in full display. All ideas, impressions, thoughts, wishes, sensations and experiences in general which occurred in the past, although apparently forgotten, are reproduced. They may all appear as visual or auditory hallucinations. The latter, as we said before, are but an exteriorization of the subconscious complexes. Wishes, thoughts, sensations, etc., of mothers are chiefly interwoven with anxiety and concern about children, who in the majority of cases constitute the central focus towards which all their activities are directed. The same unfaltering solicitude is applied by the mother in every possible way to her children whether they are infants or youths. Otherwise speaking, the most persistent, the most permanent and consequently the most powerful relation of the mother to her children with all that this implies in the sphere of profound and lasting emotions forms the chief and the strongest elements of the subconscious complexes in a woman. Herein lies, I believe, the possible explanation of the peculiar visual phenomenon observed uniformly in my patients. Toxic elements in the last three cases provoked a disturbance in the psychic functions with the result of alteration of the personality and formation of obsessive hallucinations. The element composing the subconscious world became active and the most potent of them produced the special col-

oring, so to speak, of the visual images and contributed to the formation of hallucinations in which children with all their characteristic behavior, such as crowding around their mother and embracing her, played the most conspicuous part. The alteration of personality on which the hallucinations developed was caused by metabolic disorders in three of my patients and by hysterical paroxysms in one patient.