# *Hysterical Rapid Respiration, with Cases; Peculiar Form of Rupial Skin Disease in an Hysterical Woman.*

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Drawing of unusual form of disease of skin
in a case of Hysteria.

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# HYSTERICAL RAPID RESPIRATION, WITH CASES; PECULIAR FORM OF RUPIAL SKIN DISEASE IN AN HYSTERICAL WOMAN.[1]

By S. Weir Mitchell, M.D., LL.D.,
of Philadelphia.

It is some years since first I called attention to the subject of the rapid breathing of certain hysterical patients. Since then I have seen it often—indeed, within six months four times. Several of these cases were of unusual value, because long under my care or so situated as to admit of graphic representation of the respiration types.

The phenomenon must be rare, as I find no allusion to it since my own paper, in 1883. A male case, by E. Bischoff,[2] reported in 1874, has to me the look of hysteria, but such can hardly be said of Brinton's and my own male case,[3] in which the rapid breathing was the reflex result of traumatism of the lung. This extraordinary case is still alive. In both of the cases just referred to, the type of respiration, though rapid, was deep and apparently laborious at times, so as always to lack the effortless regularity and seeming naturalness of the rapid hysterical breathing.

I have now seen so many of these cases connected with hysteria that I am able to formulate as to them certain conclusions.

The breathing is largely upper costal, sometimes exclusively so. It is exceptional to find the relative share, as between chest and diaphragm, preserved. As a rule, the breathing is slight in amount—that is, superficial, but without appearance of effort. Usually, or early in the case, the patient is ignorant of the existence of the symptom. When this knowledge is once acquired the respiration rate is increased by excitement, even by the mere approach of nurse or doctor. In certain persons the symptom occurs only just after sleep, and may be quite absent in sleep—indeed, it is usually so. In some cases this symptom is almost the only distinct expression of hysteria, or is not present at all until the patient is emotionally excited. The number of respirations goes up and down rapidly, and without any marked coincidental change of pulse. This type of breathing is not a possible voluntary product.

[1] Read before the College of Physicians, December 7, 1892.

[2] Deutsche Arch. f. klin. Med., Bd. xii. p. 262.

[3] Transactions of the Philadelphia College of Physicians, 1870.

The effort of a healthy person to breathe as fast as these patients breathe causes exhaustion, and the graphic record is irregular and unlike that of hysteria. (See tracings.) Cases in males are more rare, and cannot always be with certainty regarded as hysterical. I shall speak of them further when quoting the cases referred to by Bischoff and that of Brinton and the author.

Dr. Coates[1] has reported a number of cases of rapid breathing. They were all people who believed, or were made to think, they had diseased lungs. From the attention they were thus led to give to these organs arose types of rapid breathing.

Case I., a woman, aged thirty years, had rapid respiration from presumed pulmonary malady. By making her count twenty without inspiring she was led to take a deep breath.

Case II. is unimportant.

In Case III., a girl, aged nineteen, there was presumption of tuberculosis, but no real lung disease. Her breathing was shallow and rapid.

Case IV., a girl, aged sixteen, was enabled by deep and abrupt quick breaths to stimulate for a time the strong, lifting impulse of cardiac hypertrophy. Two other cases are given, but in none is the number of respirations mentioned.

In 1883 Dr. E. Mackey[2] described a girl, seventeen years old, who, while sitting up in bed, breathed from eighty-eight to ninety-three times per minute, with now and then convulsive gasps. Her pulse was feeble, and beat sixty-four times to the minute. Temperature, 99° F. She had had "chlorotic anæmia" and a loud systolic basal bruit, which was still so loud as to mask all other chest sounds. Morphine and atropine overcame the peculiar respiration symptom, but on the third day it rose to 88–128, and thereafter the case displayed a large variety of hysterical symptoms. The respiration was shallow and short.

The author calls attention to the difference between this and the rapid but deep breathing of certain cases of diabetic coma.

Dr. Bristowe,[3] amongst other hysterical disorders, seems to speak—if I do not misapprehend him—of hysterical dyspnœa with asthmatic symptoms. In one case there was rapid breathing, cough, and bloody expectoration, with no rise of temperature. He goes on to say that simple excess in the rate of breathing may be seen in hysteria. In the case of a woman, thirty or forty years old, with other hysterical signs, there were spells of rapid breathing, seventy or eighty respirations to the minute, and lasting from a few minutes up to several hours—the pulse remaining normal in frequency.

[1] W. M. Coates: Brit. Med. Journ., July 5, 1884.
[2] Edw. Mackey: Lancet, February 10, 1883.
[3] Bristowe: Lancet, June 20, 1885.

In my *Lectures on Nervous Diseases*[1] I gave several illustrations of this curious phenomenon. It is only necessary to refer to them. The one male case of rapid breathing there stated was seen by Dr. Brinton and myself, and is probably alone in the records of medicine as a case of rapid breathing (50–125)—caused by bullet wound of chest. The quick respiration is said to have come immediately upon the wounding of the lung. The constant dyspnœa, the type of breathing, which was normal, and other features, set this case apart from all others I have seen. Certainly it was not hysterical. In the same lectures I called attention to the diagnostic value of *rapid upper costal* respiration as sometimes of use in arousing suspicions as to the presence of hysteria in conditions of disease which would not otherwise suggest its presence. In some forms of insanity we may have rapid breathing, but the type has, in all such cases seen as yet by me, been normal and not merely costal, or with scarcely visible abdominal movement. Thus in wild mental excitement from any cause, and in acute mania, the respiration may rise to forty or higher, but, as a rule, the heart is then also in too rapid motion, and the chest movements are merely exaggerations of the normal action, and never, I believe, peculiar like those seen in hysteria. I saw but recently another illustration of the diagnostic fact just stated. A lady, aged sixty-two years, consulted Dr. John K. Mitchell, complaining of the following symptoms: Passive refusal to speak; no aphonia; great feebleness; absolute anorexia; much flushing of the face. I was inclined to regard the case as one of the forms of melancholia, until Dr. Mitchell called to my attention the fact that always on awaking, or from the excitement of a visit, her respiration rose at once to 50 or 60 without rise of pulse. The breathing was upper costal. He was inclined to think that hysteria was the dominating element in her case, and although I did not at first agree with him, his conclusion proved finally to be the correct one.

Some of the most puzzling diagnoses we are called upon to make are those in which a serious fall has left the patient palsied or unconscious. Occasionally the rest of the symptoms which appear grave, are betrayed as hysterical by the rapid rate of the respiration—a thing so constantly overlooked that, save in acute pulmonary diseases, it is rarely stated.

I have seen, very lately, in consultation a lady who suffered from the fall of a block of wood on her head. She dropped insensible and remained thus for several days, her condition causing great alarm to her friends and immediate medical attendant. The pupils were largely dilated. There was no apparent palsy. The insensibility was not profound, but to appearance deepened slowly for several days. She awoke from this state at the end of a week, and thereafter had frequent vomit-

[1] Second edition, p. 198 et seq.

ing; fixation of head—it could be turned from side to side, but not bent backward. The upper cervical region was sensitive, and pressure caused vomiting. The pulse was 80; the muscle reflexes all in excess; sensation was normal in all its forms. Meanwhile there was constant headache, but healthy eye-grounds. Many things in this collection of symptoms puzzled me. The case had very little of that look of hysteria on which one gets used to relying. But, the respiration was 50, and upper costal, and my decision, that all the phenomena were hysterical, has since been amply justified by the developmental changes of the case.

The following very remarkable case I give in full from Dr. Burr's notes:

Case I. *Case of hysterical knee-joint; relief; relapse; long trance condition; alleged fast of sixty-four days; recovery; aphonia; rapid respiration; unusual form of skin disease; failure of hypnotic treatment.*—The patient, a female, single, now twenty-four years of age, was first brought to the Infirmary for Nervous Diseases in November, 1883. The following notes were then taken:

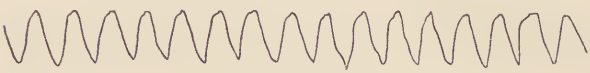
Family and personal history negative. When fifteen years old she fell on her left knee while playing in the yard. She was carried into the house, put to bed, and for six weeks suffered much pain. The pain gradually disappeared, but she was unable to walk on the affected limb, and wore a bandage to support the knee. By this means she was able to walk with comparative ease. After a few weeks she removed the bandage. Almost immediately she fell, injuring the knee again. After the fall she was unconscious a short time. She was kept at perfect rest in bed for a month, the knee bandaged, and splints applied. For two years she suffered much pain, and was unable to do any work. She walked with crutches. Soon after this she had a violent attack of "hysteria." Dr. Halberstadt, of Pottsville, was called to see her. Dr. Halberstadt writes me: "When I was called to see Miss C. she complained of intermittent pain in the head, left eye and foot, ears, and left thumb. The eyes were sensitive to light. Arms and legs rigid. Marked sweating. Respiration was 180, and pulse so rapid that I could not count it. This I saw continue for two hours, but her mother declared it had been going on for five weeks. The whole body moved at each inspiration, and her appearance was that of being worked by machinery. I could detect no disease of the kidneys or uterus." At this time she was seen by a physician from Philadelphia, who pronounced her case hopeless. She slowly improved, and finally could walk with the knee bandaged.

Her condition on admission to the Infirmary, in November, 1883, was as follows: No wasting, except that the lower third of the right thigh measured five-eighths of an inch more than the left, and the right knee one and three-eighths inches more than the left. The temperature was the same on both sides. The electrical reactions were normal. Dr. Mitchell pronounced the case to be one of hysterical knee-joint. After one month's treatment with massage and faradism she was discharged cured.

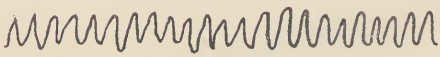
*Examination made on readmission to the Infirmary, March* 22, 1892.

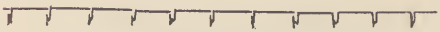
TRACINGS. (CASE I.)

Attempt to simulate rapid shallow breathing by a man in health.



The lower lines mark seconds, the upper the respiration curves.
Rate, 60 per minute.

1 

2. 

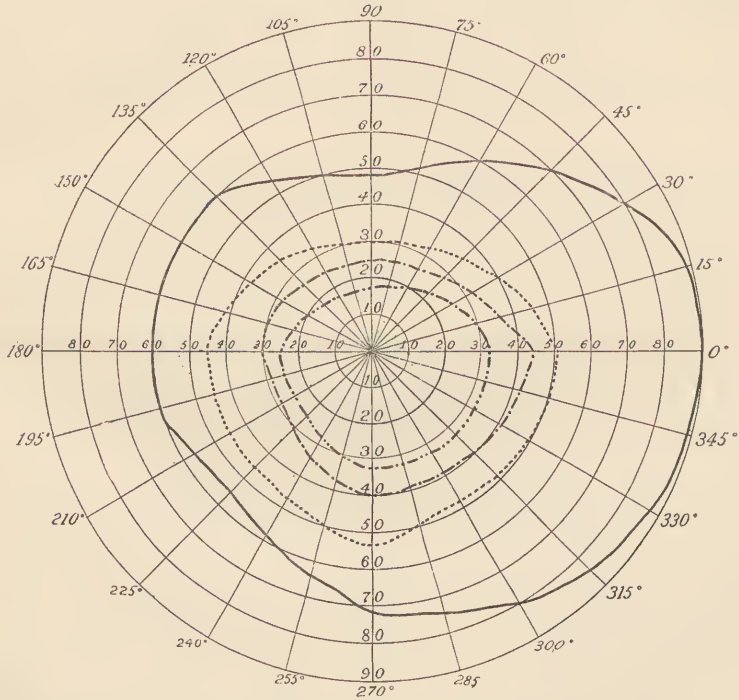
1. Respiration (126 to the minute).
2. Time (seconds).

Tracing showing hysteric cough.

*

Patient says that on leaving the Infirmary she still limped. In the autumn of 1888, on the left leg, in the place where the ulcer now is, small pimples appeared, after the application of a "strengthening wash." On being told, July 7, 1889, that her father was dead, she fell into a "trance," which lasted into October. It is alleged by her family that during this time she was watched night and day. Her sister states positively that she received nothing to eat or drink during the trance, ex-

Diagram I.




Field of vision of right eye for white, blue, red, and green. The outer continuous line indicates the limit of the form field; the broken lines the limits of the color fields, which are concentrically contracted.

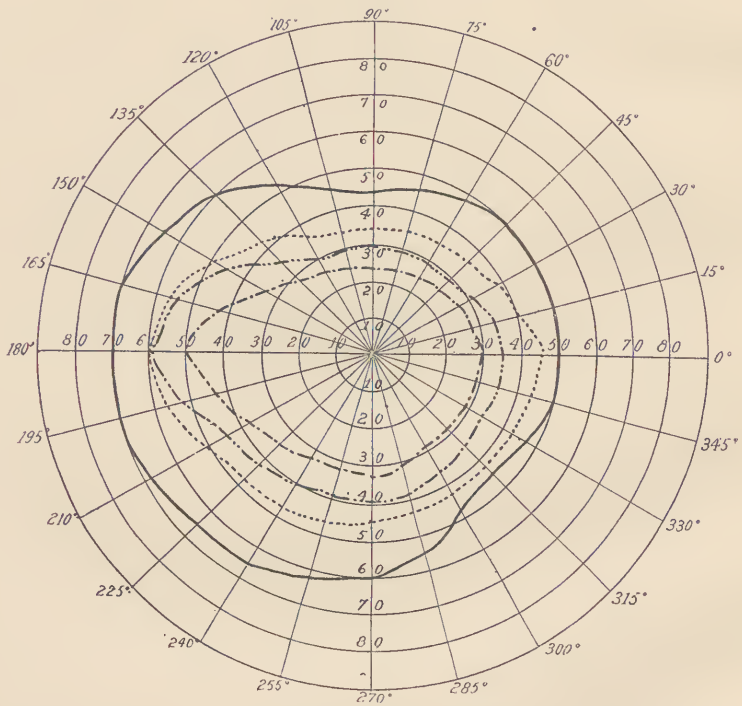
White ———— Red –.–.–.–.–.–.–.–.–

Blue ..... Green –..–..–. –..–..–..–

cept that after the beginning of September she swallowed small quantities of water. She was given an injection weekly, which was always followed by a natural stool. She passed no urine. The bed was never even moist. The eyes were shut, and resistance was made on raising the lids. Respiration could be detected only on the closest inspection. She never moved nor even winked. Her face was yellow, but she did not lose flesh. Three or four times daily she would throw up large quantities (sometimes enough to stain eighteen towels) of a dark-reddish fluid containing clots. The faradic battery was used on the arms and legs for five weeks without effect. Until five weeks before awaking,

people had been permitted to see her, and she was, indeed, on exhibition. After this was stopped she one day suddenly, without known cause, awoke, crying bitterly. She denied all recollection of what had occurred during the "trance." The left arm and leg were powerless. She could not feel the faradic battery when applied to that side. Speech was whispering. While in the "trance" the pimples spoken of above became confluent, and a thick crust formed.

Diagram II.




Field of vision of the left eye for white, blue, red, and green. The outer continuous line indicates the limit of the form field; the broken lines the limits of the color fields. There is contraction of both form and color fields, the form field having suffered proportionately the greater contraction.

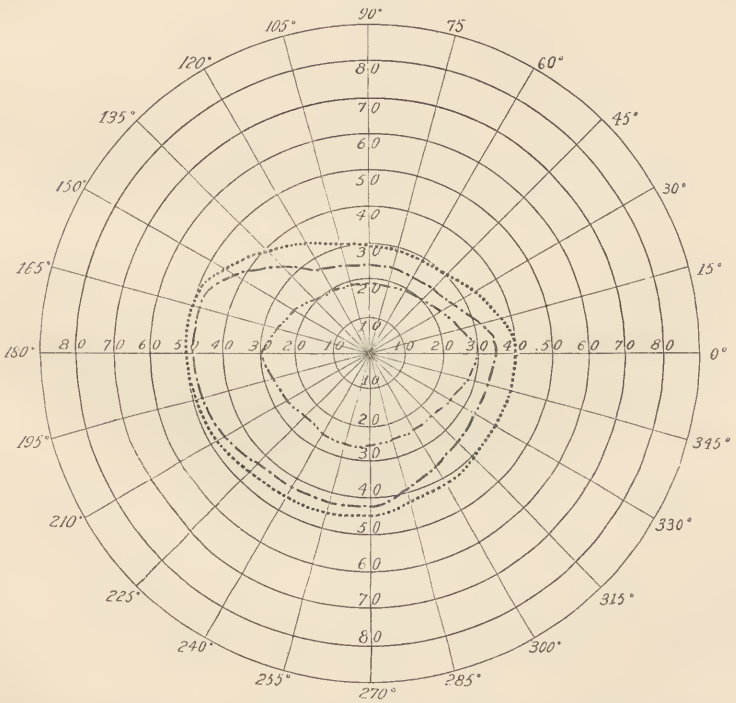
White ———————
Blue .....
Red –.–.–.–.–.–.–.–
Green –..–..–..–..–..–..–

*Present state.* Well nourished. Respiration varies from 120 to 150 per minute. It is shallow, almost entirely upper costal, and perfectly regular in rhythm. If the nose and mouth be held closed the respiratory movements continue, and after about one minute she makes one deep inspiratory effort. During sleep respiration falls to 18 or 20. The rate is increased when she knows she is under observation. She has frequent barking cough. The pulse averages 100 per minute. There is no wasting. When in bed she can move the left leg perfectly well

against resistance, but drags the left foot when walking. Station is good. Knee-jerk is plus Clonus is absent. The plantar reflex is marked. The elbow-jerk is present. Dynamometer: R., 95; L., 70. She is right-handed.

The tactile sense is hard to determine on account of the slight reliance that can be placed on her statements. The left side is more sensitive to pain than the right. Covering a large part of the anterior aspect of

Diagram III.




Field of vision of the left eye for blue, red, and green. The broken lines indicate that the limits of the color fields are contracted. The blue and red lines coincided in the horizontal meridian of the temporal side, but this is not accurately shown in the diagram.

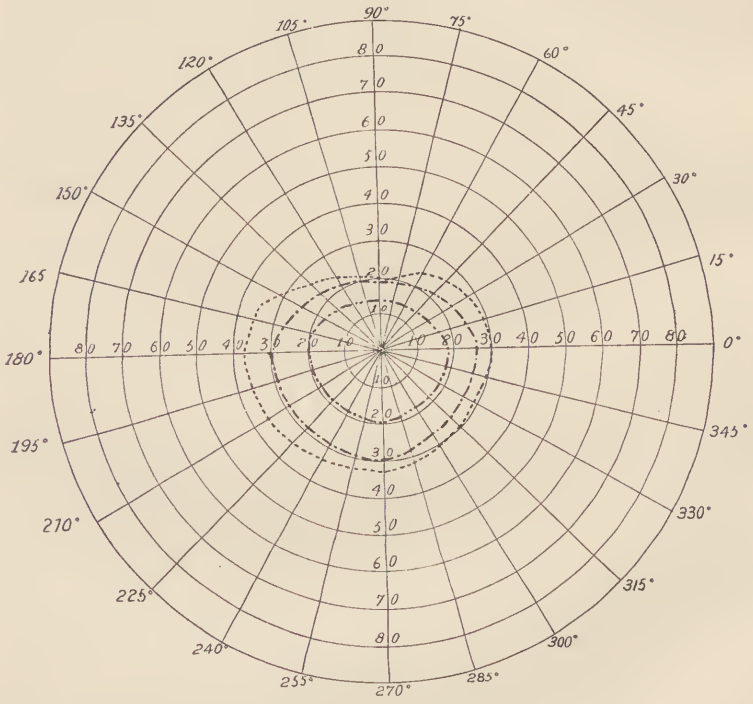
Blue ..... Red –.–.–.–.–.–.–.–.–

Green –..–..–..–..–..–..–

the leg from above the ankle to below the knee is a thick, broad crust resembling very much the bark of an old tree. It is dark-gray and much fissured. (See colored plate.) On removing the crust, while the patient was hypnotized, there was found under it a grayish-white fibrinous material, from the surface of which oozed a little blood. Around the edges the skin was thickened, somewhat hardened and hyperæmic. The area was very sensitive. (The crust is in the museum of the College.)

Dr. de Schweinitz examined the patient's eyes, and reported: "Conjunctiva insensitive; pupils normal in reaction; good fusion power; no lesions in the fundus oculi. In the *right eye* the form field is normal in extent, there is contraction of the color fields, but they occupy their normal position. In the *left eye* there is considerable contraction of the form field, and in the horizontal meridian of the temporal side the red and blue lines of the color fields coincide. This may be seen in Diagrams I. and II., and also in Diagram III., representing

DIAGRAM IV.




Blue ..... Red –.–.–.–.–.–.–.–

Green –..–..–..–..–..–..–

the color fields alone, and taken one month later. In this chart it is evident that there is slight increase in the contraction of the color fields, but in other respects it is closely similar to the other diagrams. The field of vision for colors taken during a semi-hypnotic condition shows that there was no material difference in color sense of the patient during this and the normal state, except that the color field is markedly contracted and that the blue and red lines practically coincide in the vertical meridians both above and below. This may be seen in Diagram IV."

REMARKS.—Both Dr. Burr and I repeatedly hypnotized this woman,

but neither he nor I was able to see any good result. She became, under hypnotic influence, insensible to pain, and I was then able to remove from her leg the accumulated crusts. I hoped to get her, while hypnotized, to tell me the mode in which she had carried on her deceit as to her fasting, but I failed entirely. The tracings obtained for me in this case show very well the speed of breathing (see tracings). The partial influence of an order to breathe deeply, which, in the waking state, had no effect, was well seen in one of my tracings which has been unfortunately mislaid. I have added the curves obtained by the efforts of one in health to breathe like the patient. Their irregularity as contrasted with the forms of the hysterical curves of breathing is very interesting. I did this case no good whatsoever, because of her being in a ward where she was the subject of not unnatural curiosity.

Dr. Duhring's examination of the skin disease completes this interesting record. It is placed at the close of this paper. A careful search leads me to agree with Dr. Duhring in regarding this form of skin disease as of most unusual type.

Case II.— S. M., female, aged twenty-one, single, mulatto. Applied for treatment at the Infirmary, September 10, 1891. There is no obtainable family history, and, owing to the woman's want of intelligence, her own symptoms and past history are inadequately related.

In 1887 she is said to have had a sharp bronchitis which lasted all winter and was accompanied with loss of voice for a year. This was probably hysterical, since in December, 1887, she suffered with colic, out of which arose a seven months' siege of varied hysterical symptoms, with frequent severe headaches and numerous convulsions of grave hystero-epileptic type. She was seven months in bed, but knows little of what passed. In May, 1888, she was taken to St. Luke's Hospital, New York, in a comatose state, and so remained four days. Having improved somewhat, she went home, where soon again she became wildly hysterical. Fits of severe character and two hours' duration were followed by stupor lasting many hours. This condition was present up to the time of her admission to the Infirmary.

At this date Dr. Hirst reports her generative organs normal, except that the womb is rather undeveloped. There is no ovarian tenderness and no evidence of epilepto-genetic spaces there or elsewhere. She has imperfect pain-sense on the left side—leg, arm, and body—with paresis of both legs and the left arm. The abdominal and thoracic viscera show no signs of disease. Appetite and digestion are normal. There is no anæmia. The knee-jerk is markedly increased. There is slight clonus—from three to five jerks. The pulse is normal; temperature normal. Respiration varies from thirty to fifty per minute. It is of upper costal type chiefly, but at times the abdomen and lower ribs move. Generally it is difficult or impossible to distinguish the least motion in the diaphragm. During sleep the respiration rate falls to twenty per minute. These peculiarities of breathing were not known to the patient, They seemed to cause no fatigue, although to breathe voluntarily as she did, very soon produces exhaustion in the healthy. She improved rapidly as to all her hysterical symptoms except the breathing.

CASE III.—C. M., female, aged nineteen, single. At the age of seventeen years the patient had, after a slight accident in driving, some tenderness in the spine, and after a year, upon a fright after exposure in a thunderstorm, partially lost her voice. This was at times better, or well, but in March, 1890, she had laryngitis, with a sharp attack of the grippe, and then abruptly lost all voice except power to whisper. She was told in New York that it was not hysterical, but a rare form of loss of power in the abductor muscles of the larynx. Electricity gave no relief. The aphonia improved in the late summer. It is said to be nearly well, but the voice is easily tired. Up to November 23, 1891, when I first saw her, she had been very emotional and hysterical; tears and attacks of rigidity continued to trouble her. At this time she is in good flesh, rosy, and to appearance well, but relies much on her mother, and is at all times easily made hysterical. Her blood is close to normal in number of corpuscles and amount of hæmoglobin. All the digestive, renal, and menstrual functions are well performed. There is no ovarian tenderness.

*Sensation.* She is over-sensitive to a pinch of the muscles. The arms, back, and abdomen, but not the face, present small analgesic areas, irregular in form, one to two inches wide, and varying in location from day to day. There is no loss of sense of touch, locality, or temperature. The legs present no analgesic areas. There is pain in the back along the spine and over the loins. It is worse on exertion, and at times absent. There is constant severe pain in the posterior aspects of both legs in the gluteal regions. This is apparently a muscular trouble, since in all these parts pressure is painful.

*Locomotion.* When supine she can move all limbs well, and both extended legs can be lifted together. When erect she sways with jerky recovery of position. With the eyes shut this is enormously increased, presenting a true type of the hysterical ataxia I was the first to describe. Thus, when erect with the feet together, for a moment all is well, then she sways forward or backward or right or left eight or ten inches, and with an abrupt effort recovers her upright position, only to fall to and fro anew. Her walk is better, but is not quite regular, and she drags the left foot, with the toes outward. The knee-jerk is much increased. There is slight ankle clonus—five or six movements—on the right. On the left it is absent. The bladder action is normal. All motion wearies her quickly. Her pulse is usually higher at night, but is very changeable. The respiration also varies, but on the least excitement rises and remains high rof an hour or more. Massage, electricity, my visits, etc. all increase the respiration rate. Her pulse and respiration averaged as follows:

| | | | |
|---|---|---|---|
| Respiration . . | 40 | Pulse . . . . | 80 |
| " . . | 30 | " . . . . | 75 |
| " . . | 60 | " . . . . | 85 |

She was put at rest, forbidden to speak for three weeks, and given localized faradic currents and daily massage. She made a good recovery, but only after some months won complete use of all her powers.

I have seen, as I have said, other cases and many of this type of rapid hysterical breathing, but the cases here given may suffice.

### Remarks by Dr. Duhring.

I had the good fortune, through Dr. Mitchell, to see Case I. a few weeks ago. The disease had existed three or four years, and there were several remarkable points about the crust. It differed in character from the known crusts, as those of late syphilis, and those from simple ulcer. It differed from syphilis in that it was made up largely of epithelium and not of dried pus. This was verified by the microscope. This, too, was manifested on seeing the lesion of the skin proper without the crust. There was no ulceration beneath the crust, but the epithelial layer and rete mucosum were atrophied and diseased. The papillary layer was reddened and infiltrated as seen in chronic tinea favosa. The cause and origin of this lesion and the crusts must be considered together, as they are a part of the disease. The interpretation of the cause as suggested by Dr. Mitchell, namely, that it is of nervous origin, is, I believe, correct. It is due to a degeneration of the nervous system, giving rise to local trophic disturbance of the skin. We may designate it as a peculiar trophic crusted disease of the skin. The state of the whole nervous system is accountable for this disease. It is a local manifestation of a general neurotic affection, and not a disease produced by changes in a single nerve or set of nerves.

The nature of the disease, pathologically, is an inflammation of the skin and subdermal tissue of a low type, due to aberrations of local nutrition. Sarcoma and other similar ulcerative or crusted diseases are not suggested by the appearance of the lesion. It is very difficult to class such cases in dermatology. It bears some resemblance, from a pathogenic standpoint, to keratoma and callosity. The disease may be grouped with such cases as that of the one described and portrayed in the second number of the *International Atlas of Rare Skin Diseases*, by E. Besnier, with the title "Keratodermia Erythematosa." In regard to the crusts on bromide ulcers, if they are examined they will be found to be made up of sebaceous matter and pus—they are, in fact, largely puriform in character. I saw a noted case in London, shown to me by my friend Dr. Tilbury Fox. I have a photograph of it. The crusts were the size of a hand and were made up of sebaceous matter and pus.