ferent substances contained in them; not their absolute quantity, because we are never able to obtain the whole of these fluids, nor, indeed, are we able to arrive, with even tolerable certainty, at the quantity contained in the body upon which to found a calculation: we must be satisfied, therefore, with the relative proportions, and if we find that these vary much from the normal proportions, we may safely set these variations down to the changes effected by disease, or by the remedies employed.

The bearing in mind that the constituents of the blood are merely proportional, will explain several circumstances in the present series of analyses, which would otherwise be sufficiently puzzling. I allude to the amount of hæmatosine taken in conjunction with the quantity of phosphate of iron in the blood. The first fact that strikes us, in looking over the amount of constituents, is the relative concentration of the blood, which is much greater in the blood of the patient when salivated than before the exhibition of mercury; the proportion of water lost in the 1000 being 6.908 grains. This probably arises from the increase in the amount of saliva and urine.

The fibrine (or, at all events, the oxides of proteine) is very greatly diminished, being reduced from 4.636 to 3.271, or 1.365 grains in the 1000; a difference of more than one-fourth of the whole quantity originally contained in the blood.

The albumen has also undergone the striking diminution of 8.655 parts, or about one-tenth of its whole amount.

The hæmatosine has, on the other hand, increased 13.430 parts; to me a totally unexpected result, since iron, a constituent of this substance, was found in the urine. Still, as the fibrine, albumen, water, and other constituents of the blood, had diminished to a very considerable amount, the hæmatosine must proportionally increase, as it does in this case, unless it underwent, at the same time, a proportional diminution, which it does not appear to have done. This shews that the hæmatosine is one of the most staple of the constituents of the blood, and that it is more than probable that it is only very slightly affected, except when the assimilating organs have been long deranged.

The loss of fatty matters is very great, being .796 of a grain in 1000 grains of blood, or more than half of the original quantity which was deficient when compared with Le Cann's analysis. This might be expected, as we know that salivation quickly reduces the amount of fat in the body of the patient.

The osmazome, or animal matter soluble in water and alcohol, originally deficient, is somewhat reduced; the albumen combined with soda is, on the contrary, rather increased.

The alkaline salts have also undergone a diminution, while the earthy phosphates are increased very considerably. The loss in the first analysis is estimated with the water, in the second is stated separately.

The results of these analyses are exceedingly interesting, shewing, as they do, a marked diminution of two of the most important constituents of the blood, fibrin and albumen; or, as Muldre has shewn, the proteine compounds.

It is a well ascertained fact, that these compounds are increased, in a very marked degree, in blood of inflammatory patients, and that this is particularly the case in inflammations of serous membranes when the buffy coat is very thick.

It is still uncertain whether the albumen undergoes a proportionate increase to the fibrine or peroxide of proteine in these diseases, but it is probable that such is the case. We have here the reduction of the amount of these substances to nearly the natural standard, by the action of mercury, which fully coincides with our previous theoretical notions, and at the same time explains the almost sudden cessation of the inflammatory process when the mouth is fully affected, and the consequent diminution and subsequent absorption of the effused fluids, which is, perhaps, induced by the more concentrated state of the blood.

The comparative proportionate increase of hæmatosine is, moreover, of importance in the explanation of the reduction or oxidation of the fat of the body, since it will increase the proportionate amount of oxygen carried into the system; and it must be to some such action that we must attribute the power which mercury exerts in the removal of abnormal deposits.

I may, perhaps, be accused of generalizing too freely on a single instance, but the changes are so well marked as to justify me in so doing. My chief object in publishing this solitary case is the hope of exciting others to the same line of inquiry, which is of a most important character, and will be, without doubt, of the greatest utility to the practice of medicine, for it will have the effect of rendering our practice truly scientific, instead of merely empirical or experimental; and it cannot be denied that men use their instruments much better when they are acquainted with their mode of action, than when totally in the dark as to the objects they have in view in employing them.

Howland-street, Fitzroy-square,
Dec. 13, 1844.

AGGRAVATED CASE OF ECZEMA RUBRUM ON THE GENITAL ORGANS, MISTAKEN FOR SYPHILIS.

By W. ACTON, Esq. Surgeon to the Islington Dispensary.

(Read before the Westminster Medical Society.)

A CHILD, nine weeks old, was brought to me by its mother, in great alarm, in consequence of having been told by a medical man that the complaint was venereal.

The child was a fine stout boy, but very fretful. The eyebrows presented distinct vesicles of eczema. The inside of the mouth and lips free from disease, but just at their margins, and extending for the space of an inch and a half, completely encircling the mouth, the skin presented a dusky hue, and appeared covered with a thin, shining, dry pellicle, like a recent blistered surface, interrupted with cracks and crevices, without exudation, except beneath the chin, where the capstring had irritated the surface; and here a serous-looking fluid exuded, and excoriated the surrounding parts. Beyond this, distinct and separate clusters of vesicles could be seen, presenting a dusky hue. On the arms and chest a few small patches of these vesicles were apparent. The disease, however, seemed to have settled principally on the lower part of the abdomen, scrotum, thighs, and nates. The entire surface of these parts presented a shining, but dark or dusky-red surface, as if covered with a thin pellicle, similar in appearance to that found on a healing blistered surface. The temperature of the surface was much above that of the surrounding parts; no vesicles could be detected; this unhealthy-looking skin was creased and plaited, with a disposition to crack; in many places large thin flakes could be detached; every movement the child made appeared to cause great pain.

The mother states that her other two children are, and have been, quite healthy; her husband has never complained of illness; has suckled her own child, which has never been out of her sight; has never nursed any other woman's infant. The child enjoyed good health until three weeks old; at this period it was seized with thrush; the throat became affected, and soon after an eruption appeared around the arms, which has gradually spread over the parts now affected. For some weeks the child was under the care of her usual medical attendant, and treated with powders and ointment; the mother, finding the complaint getting worse, consulted another medical man, who, after looking at her boy, told her not to be offended, but her child had the venereal disease, and mercury was necessary for its cure. He prescribed a grey powder twice a day. The terror of the mother was, as may be supposed, great, when made acquainted with her child's complaint: for herself she could reply, and as to her husband's conduct she never had entertained the least suspicion. The medical man was no less positive, and further enjoined her not to suckle the infant, lest she should herself become infected: the friends in the meantime becoming alarmed, recommended her to take a third opinion.

On seeing the child I felt no hesitation in stating that it suffered under an aggravated form of eczema rubrum—a complaint which I more than once have seen mistaken for syphilitic disease; and as it presents several features of great interest, I have brought it forward before this society as one illustrating the diagnosis of a most interesting class of infantile diseases, not usually dwelt on in books on that subject, yet leading to most lamentable consequences in practice. I presume the dusky colour of the skin, the obstinacy of the complaint, and the possibility of the father having been infected with venereal in his youth, may have imposed on this practitioner, as it has done on others, who have characterized similar complaints, syphilitic. My own opinion was formed on the following data:—The general appearance of the child, strong and plump for its age, contraindicated any syphilitic taint; in almost all cases, previous to secondary symptoms appearing, we find children fall away. The skin presents generally an earthy hue, and before syphilis has existed six weeks, the infant is reduced to a skeleton. The dusky colour of the eruption on the child certainly might lead to the suspicion that the complaint was syphilitic in the minds of those who place much dependence on colour as a criterion of syphilitic eruptions, but most modern writers agree in this test being very fallacious, as no recent eruption of a syphilitic character is copper-coloured, and many old and non-specific diseases of the skin take on a bluish or livid character. Moreover, the vesicular form of secondary symptoms is a very uncommon affection; those who have had the greatest opportunity of witnessing venereal diseases not having met with more than one, or at most two, instances of the disease. The only affection, then, that this disease could be confounded with, would be that form of the complaint shewn in the plates (which I pass round;) but it will be seen that it there assumes a flattened, tuberculated form: in this

instance no elevations could be seen or felt. The severity and duration of the disease equally bespeak the case to be one of eczema rubrum, as that complaint is well known to be very rebellious to ordinary treatment, unless a correct and even appropriate treatment is recommended, for an exactly opposite one is requisite in the one and the other disease.

In this case the first indications of treatment consisted in attempting to reduce the temperature of the part, and to apply locally a soothing application. I recommended the mother to place the child in a bran bath, night and morning; to be careful not to employ soap, or dress the child in front of a fire; to keep fine linen rags, damp with Goulard's lotion, constantly to the child's nates and scrotum, re-applying them as often as they became dry; to protect the infant from catching cold, by enveloping it with flannel, so as to maintain the general temperature of the surface.

I am prepared to hear this treatment cavilled at as one fraught with danger, and the probability of inflammation attacking some internal organ. I can only say that where ordinary precautions are taken to exclude air, no apprehensions need be entertained. I have seen infants like the present very speedily cured, when all other means have failed, and in old people, much reduced, no ill consequences have followed, although, as in this instance, the surface constantly kept wet has been considerable.

All kinds of ointments or greasy applications are, as in this case, prejudicial; they soothe the part for the moment, but seem then to increase the temperature, are liable to become rancid, and frequently occasion a relapse of the complaint.

As the child had taken three grey powders, (its bowels, previously regular, having become relaxed,) I did not order any physic, being determined to watch the effect of simple local treatment. The mother was desired to give the child the breast, as in its present condition it would be difficult to find any other person to suckle it, for fear of infection. I desired her, however, to live regularly, abstaining from cheese and raw vegetables, or anything that might disagree with the stomach.

Nov. 25.—On the next morning the mother came to me delighted; her child had been much less fractious, and slept for several hours after the bran bath; she had constantly kept the lotion applied by means of a damp lawn handkerchief, completely enveloping the parts affected. The temperature of the skin is now natural, the dusky colour of the surface disappearing, and large portions of a thin pellicle are peeling off; motions continue still unhealthy; so continue the same treatment.

27. The skin is resuming its healthy structure; here and there are a few creases, which exude a thin serous fluid.

29. All traces of the disease have disappeared, except red marks, which the creases, now rapidly healing, have left. Ordered to leave off the lotion, but to continue the bran baths, night and morning; the child's bowels have become quite regular.

December, 1844.

SINGULAR CASE OF LUMINOUS BREATH.

By G. C. WATSON, Esq., M.D.

(Communicated to the Liverpool Pathological Society by Dr. Gill.)

DR. WATSON is permitted to report the following notes of a case which occurred in the men's sick ward of the West Derby Union Poor House, near Liverpool, by the surgeon, Mr. Fell:—

W. M—, aged forty-seven, was admitted into the above institution on the 17th Oct. last. He complained of hæmorrhage from the bowels, and severe cough, with expectoration; pulse at 110. The hæmorrhage was soon relieved by appropriate remedies, but the cough and expectoration continued to get worse. About the beginning of November anasarca began to shew itself, and increased until the day of his death, which took place on the 16th Nov., at half-past eleven p.m.

The habits of this man had been *drunken*; his occupation that of a labourer. No other particulars regarding his history or the more precise nature of his broken-down health could be obtained, the man having been a stranger, and nothing particular occurring in the progress of his ailments up to the dying hour to attract special attention. Dr. Watson had to regret that the outline, therefore, of the case was so meagre; in fact, owing to the lateness of the hour when he sank, no medical eye witnessed the phenomenon attending his dissolution, which is the subject of the subjoined statement; the man who was on night-duty and the usual male nurse of the ward not deeming it necessary to disturb the house, or any one about, because he despaired of anything being availably done for the evidently expiring man. Frightened, however, by the sight he had witnessed, and regarding it in a superstitious light, the natural result of his ignorance, he looked upon it in a *moral rather than a medical aspect*, and therefore did not mention the affair till two days after, when the corpse had been removed from

the house for interment. This accounts for the fact of no post-mortem examination having been made; the surgeon was not made acquainted with it, or an autopsy would have been instituted, though it does not follow that any additional light would have been thereby elicited. Dr. Watson took down from the nurse's own lips, some time after, the following, being, as he vouched, a solemn statement of the truth:—

Nov. 16th.—Eleven p.m. Nurse observed a "*red-hot coal-like streak on M—'s mouth*, and (playing) *on his right cheek and top lip*," as he lay in the insensibility of approaching dissolution. This flame lasted for about twenty minutes—i. e., until death. Nurse rubbed his eyes, thinking he might be mistaken in the fact before him, and also called to a man lying in bed opposite, to jump up and look at the flame out of M—'s mouth: this man, a patient who occasionally acted for the nurse, distinctly observed the "*red-hot*" appearance on the cheek. At the time, neither of them went up to the dying man (M—) whilst this luminosity of the breath continued; but *after the breathing had ceased*, and with it the *light of slow combustion had disappeared*, then nurse went up to the bed and tied up the chin of deceased: this was, as near as he could tell, about half-past eleven. M— was unconscious of the singular appearance about his face; at least, such the nurse thought, because for the hour previous to death he had not spoken a word. It may be remarked, that he might have been conscious of this, as also of the fact of his dying, but that he was too enfeebled to speak; this cannot be determined; only the impression on the mind of the nurse was, that *he was insensible during the whole of this luminous combustion of the breath*; he lay with his eyes open, on his back. The "*flame was red, just like red-hot coal-fire*," to which the nurse and the other man (McIvor) both compare it. Nurse pointed to the centre of the clear fire then burning in the ward when these notes were taken; it was "*not blue*," it was *persistent* with the breath of expiration, ("*when he breathed out*,") and not *lambent* ("*not flickering, coming and going*,") There was in the room, which was about twenty or thirty feet long, a common "*raked*" fire in the fireplace at one end, close to which the nurse stood, and a gas-jet burning low, ("*very low*,") suspended from a rafter in the middle of the room, and about twelve feet from the dying man's bed. At first, on puzzling over the strange appearance of flame from the mouth of a dying man, and awestruck with what they had never witnessed the like of before, they began to fancy whether it could have been caused by the reflection of the fire or of the gas, but they soon became satisfied in their own minds that it could not be owing to either.

There "*had not been any wandering of the dying man's senses*." Nurse did not speak to him, nor he to the nurse, during the above.

Mercer had not been taking any phosphoric medicine at all, nor any alcoholic stimulant during that day, or for six weeks previous, though he bore the character of being a drunkard. Nurse and McIvor were both terrified so much, that they dared not stir from their place until the flame had ceased. It seems worth while quoting the expression of the nurse, not as an embellishment, but because it adds much to the verisimilitude of the narrative, as indicating positively a state of mind produced by the occurrence; and it accounts for what was stated in the beginning—viz., that the thing was not reported to the governor or surgeon until two days after, owing to the fact that the two witnesses of the above scene viewed it in a *moral point of view*, and as quite *out of the department of physiology or physic*, and thus from a reserved feeling about exposing the last state of a man whom they judged to have been in death visited, as it were beforehand, with the terrors of future judgment. M— had been swearing and blaspheming the day before. Nurse states that McIvor exclaimed, thinking of the man's character, "*God bless me!—it is dreadful to look at it; it seems like a punishment, as he was so wicked a man!*" McIvor was too frightened to go near the bed, even after death.

Nurse states that there was not the slightest singeing of the face, whiskers, or night-cap, to be detected afterwards; the cheek was pale, and nothing extraordinary about the corpse could be observed.

Dr. Watson took down afterwards, from McIvor, his account of the affair, but not till a week after, McIvor having left the house before the nurse's account was noted down, and having had no chance of seeing the nurse since; Dr. Watson's reference to McIvor having been made circuitously, and not through the nurse, so that there might be little chance of collusion between them to tell the same tale.

McIvor was a respectable man, though a pauper; his account Dr. Watson had taken down, from his own mouth, in full, and McIvor signed it afterwards, averring for the truth of each word of it, in corroboration of which, he offered to make oath, but this was not wanted.

This second account, corresponding essentially to the story of the nurse, was read to the Pathological Society; but as it is a re-