tion. It has been ascribed to spasmodic action likewise. The occurrence of it at a very early stage would afford good grounds for this supposition. As the pain is the symptom which causes most distress, erection of the organ may to some extent be prevented by the internal use of bromide of potassium, opium, and camphor, and the local, as well as internal, use of belladonna, cold bathing, etc. Epididymitis, or swelled testicle, is seldom met with save in chronic cases, or where violent injections have been used during the acute stage. In the acute stage of epididymitis, relief is obtained from leeching, hot fomentations, and the exhibition of calomel and opium. In the chronic, the administration of the bichloride of mercury and local blistering afford the best results. This condition is essentially due to an extension of the urethral inflammation by contiguity of surface. One important complication of swelled testicle is inflammation of the cord. Not unfrequently the vas deferens is felt like a quill under the finger. As this condition, if unattended to, may occlude the vas deferens, and, if on both sides, thus cause sterility, it claims particular attention. On the part of intelligent patients it gives rise to considerable uneasiness.

Gonorrhœa in the female is amenable to the same treatment, the beneficial results from balsamics excepted. The tincture of the muriate of iron will, however, be found equally valuable in vaginal gonorrhœa. In the preventive treatment of gonorrhœa, cleanliness is of primary importance; and I incline most decidedly to the belief that, when any suspicion of the disease exists, its course may be checked by the tenuous use of astringent or caustic injections. While the disease afflicts humanity, and not unfrequently proves a *casus belli* in the family circle, it is ours to study the best methods of cure, and the meanest disease of the human body is alike the care of the moralist and the philanthropist.

RASH IN RELAPSING FEVER.

By T. CLAYE SHAW, M.D. Lond., M.R.C.P.,
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THE two following cases are of interest in connection with the disputed question of the occurrence of rash in relapsing fever. In both instances the character of the rash and the time of its appearance were precisely those of the typhus eruption, and the diagnosis had to be made from collateral symptoms. The particular form assumed by the eruption was that of irregular rounded patches, of rather livid colour, and not very distinctly elevated above the skin, disappearing completely on pressure. These patches appeared upon the back of the wrists and arms, on the borders of the axillæ, across the chest and abdomen, and (though apparently in a less advanced degree of development) on the legs. The absence of the heavy expression of features characteristic of typhus, and the presence of the thickly furred tongue of relapsing fever in a marked degree, directed the diagnosis. In both cases the eruption disappeared with the diaphoresis at the time of defervescence; but in one of the two it reappeared with the "relapse", went through the same course, and disappeared in the same manner without leaving any stain or mark upon the skin. Both these persons were of very dark complexion, with black hair and dark-brown eyes. This I have noticed especially among the fever-patients sent to this Hospital, that, even allowing for the greater preponderance of dark over light-complexioned people in this country, the number of dark-complexioned persons affected with relapsing fever has been in very great excess; and not only so, but the symptoms of the primary attack and relapse have been undoubtedly more severe, both as regards the pain and the height of temperature reached, in the dark-complexioned persons. This exaggeration of the symptoms in persons of a particular temperament is akin to what is noticed in severe neuroses; e.g., chorea, where it is certainly the exception to see light-complexioned persons attacked.

CASE I.—H. T., a married woman, five months pregnant, was admitted February 25th, having been suddenly seized on the 19th. She came from a house in which several persons had been attacked. The symptoms of the fever were the ordinary ones—sudden seizure, pains in the head, back, and limbs, and rigors; but, in addition, the mottled rash above alluded to appeared on the fifth day from the commencement of the symptoms. Her state on admission was as follows. The face was pale, with slightly injected conjunctivæ. There was slight tenderness in the epigastric region and over the liver and spleen. She had no jaundice. The tongue was of the typical character; the breathing was very hurried; the urine was high-coloured, not albuminous. Pulse, 150; temperature, 102 deg. Over the arms, chest, abdomen, and legs, was a rash of somewhat purple tint, disappearing on pressure. The crisis occurred on the seventh day by profuse sweating, and with it the rash disappeared. After an interval of seven days, the acute symptoms recurred; and, on the fourth day of their recurrence, the rash reappeared

in precisely the same situations as in the primary attack. In due time, the second defervescence ensued, the rash disappeared, and permanent recovery followed. In addition to the skin-phenomena above noted, the lungs were affected in a manner that seems very common in relapsing fever; thus, during the pyrexial stage, there was some amount of cough, and dry sibilant sounds were heard over the back part of the lungs. When the sweating occurred, the dry sounds became moist, and a considerable amount of expectoration followed, showing a kind of consentaneous action between the lungs and the skin. This is to be observed in most of the well-marked cases of relapsing fever. Though this woman was pregnant, no miscarriage occurred.

CASE II.—J. P., a vagrant, was admitted on the fourth day from the seizure. In addition to the usual signs of relapsing fever, there was a well-marked dark-red rash, disappearing on pressure over the arms, chest, and abdomen. Crisis by sweating occurred on the fifth day, and with the sweating the rash disappeared. After an interval of five days, a slight relapse occurred; and, though the rash did not here recur, yet the bronchial disturbance reappeared as in the primary seizure, and terminated in a couple of days by expectoration, when the second sweating came on, indicating the second defervescence. The second relapse happened, and the patient was discharged cured.

ON THE TREATMENT OF CERTAIN FORMS OF CEREBRAL PARALYSIS BY THE CONTINUOUS GALVANIC CURRENT.

By JULIUS ALTHAUS, M.D., M.R.C.P.,
Physician to the Infirmary for Epilepsy and Paralysis.

THE most frequent form of cerebral paralysis is hemiplegia; and a large amount of experience has already been collected, showing the beneficial effects of both the continuous and the induced current in the different phases of hemiplegia. In the present paper, it is my intention to give, as concisely as possible, the results of my experience with the continuous current in cases of cerebral paralysis which do not assume the form of hemiplegia.

In paralysis, owing to tumour or abscess of the brain, or any other severe structural lesion, no form of electricity can do any positive or permanent good. But where it occurs in consequence of exhaustion and serous effusion, the continuous current is the quickest and most effective remedy for it. The following is an instance of this kind of paralysis.

A merchant, aged 52, married, had been in a low state of health for some years past, in consequence of much anxiety and trouble, but had not suffered from any serious illness. He was sitting quietly at home, on July 20, 1867, writing a letter, when he suddenly felt faint and giddy, the pen dropped out of his hand, and he completely lost the use of the right arm. He did not lose his speech and consciousness, nor the use of the leg; nor was the face distorted. A friend who happened to be present advised him to put his hand into boiling water, which he did, and blistered it most severely with it. (The same barbarous treatment, which of course cannot do the least good, has been adopted in at least a dozen cases of paralysis which have been under my care.) As the scalding of the arm and hand produced no effect, a cold douche was next applied to it, and the wrist was then a good deal knocked about, in order to get the life back into it. As none of these violent measures had the least effect, the patient consulted me two days afterwards, when I found complete paralysis of the forearm and hand, and nearly complete anæsthesia of the hand and fingers. I applied a current of twenty cells of Daniell's battery to the left hemisphere for one minute, after which the patient lifted his wrist and moved the fingers to a slight extent. I did not use any peripheral galvanisation. Two days afterwards he came again, when I found that the improvement had continued, but had not made further progress. I then again resorted to cerebral galvanisation, with the effect that a little more action in the hand became manifest. But, as it was still very weak, I now combined peripheral galvanisation of the radial and median nerves with it. The effect of this was apparently even greater than that of the cerebral application, as the patient could grasp my hand firmly afterwards, and dress himself without assistance. Another application of galvanism on the following day completely restored the use of the hand and fingers.

Concerning the pathology of this case, I would remark that evidently no rupture of a blood-vessel could have taken place in the left hemisphere, as then the effects of the continuous current, applied shortly after the seizure, could not have been so great. The paralysis in this case evidently arose from exhaustion of that portion of the brain which

is the centre for the motor nerves of the upper extremity, and was probably accompanied with some serous effusion.

The beneficial effects produced by peripheral galvanisation in this case do not clash with this view; for no absolutely peripheral galvanisation is possible, since a portion of the current used probably always travels towards the centres of the nervous system. A proof of this, amongst others, is the sensation of taste which is frequently perceived by patients while their hands or legs are galvanised; and which was the case with the patient just mentioned. That serous effusions may be rapidly absorbed by the passage of the continuous current through the parts affected, is likewise shown by the instantaneous effects which the continuous current frequently produces in cases of muscular rheumatism.

Most cases of paralysis which occur during convalescence from acute diseases have the same pathology as the case just described, and should therefore be treated by the same means. In these conditions, the induced current is not nearly so useful as the continuous, because its effects are only peripheral, while the disease is of central origin. Cases of this kind occur after measles, scarlet-fever, small-pox, erysipelas, typhoid fever, cholera, pneumonia, dysentery, and puerperal fever. Diphtheritic paralysis has a somewhat different pathology, as it is due partly to the local effects of the poison on the pharynx, and partly to its general effects on the blood. In this form of paralysis the pharynx is always first affected, and sometimes remains the only part which is paralysed; while in other instances the muscles of the eyes, the lower extremities, the upper extremities, the muscles of the trunk, and the respiratory muscles, become affected in the succession in which they have just been mentioned. Anæsthesia often precedes diphtheritic paralysis, and farado-muscular and galvano-muscular excitability is generally normal. In all such cases no time should be lost in employing galvanisation, as the probability of cure is in inverse ratio to the length of time which has elapsed since the commencement of the affection.

Where paralysis after acute disease takes the form of complete hemiplegia, which is on the whole rare, the disease is not so rapidly curable as where it is either more localised or more general. There is probably in such cases actual hæmorrhage into the brain, and not merely exhaustion and serous effusion.

REPORTS

OF

MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS OF GREAT BRITAIN.

LONDON HOSPITAL.

CASE OF CÆSAREAN SECTION FOR DEFORMITY OF PELVIS: DEATH.

(Under the care of Dr. HEAD.)

MR. STEPHEN MACKENZIE, the Resident Accoucheur, has kindly furnished us with the following notes of the case.

Mary Oxley, aged 35, was married when 21 years of age. Twelve months afterwards she had a child born, after a confinement of average difficulties for a first labour. In eleven months, she had a second child; and six months later she had a miscarriage "at three months". A third child was born one year and seven months after the second "good labour." In fifteen months a fourth child was born. This was followed by a fifth and a sixth. Within a month of the last confinement, she caught cold, and was laid up—indeed, quite unable to move—with pain in many joints (the medical man said it was rheumatic fever), and general feeling of weakness. After three weeks she began to get about, but found that the least exertion brought on pain in the back, etc. She did not live very well at this time. About a year after the commencement of this illness, she found that her back was getting out of shape, and her dresses were too short at the waist; and that, whereas formerly she could place her chin on her husband's shoulder, now the top of her head would barely reach as high. Three years before admission, her last child was born. Mr. Mead of Hackney attended her, and she said "that the child's head was broken up, and a string tied round its feet, before she could be delivered". About fifteen months ago, she had a miscarriage (at three months). Her eldest and youngest children are still living.

On admission, she was suffering from a very considerable angular curvature in the dorso-lumbar region of the spine. A vaginal examination showed the pelvis to be markedly rostrated. The pubic arch was much narrowed; only one finger could be passed between the

rami. The tuberosities of the ischia were scarcely more than an inch apart. The coccyx was freely moveable. A prominent hard swelling could be detected bulging from behind forwards to within about an inch of the pubes, and was rather more prominent on the left side than on the right. This was taken by every one who saw the case (although they were aware of the curvature of the spine, and were thus placed on their guard), from its position and feel, to be an exostosis growing from the sacrum; but, at the autopsy, it was found to be due to a settling down of the lumbar vertebrae into the pelvis. The os uteri was so high as to be out of reach.

At 2 P.M., on April 2nd, Cæsarean section was performed by Dr. Head. The placental attachment having been ascertained to be on the left side, the uterine and abdominal incisions were made in the middleline, and a female child and placenta were readily extracted, the former giving evidence of its vitality by lusty cries. A sponge probang was passed from the uterus into the vagina, so as to ensure an escape for the lochia. On the removal of the placenta, there was considerable hæmorrhage from the placental attachment and from the uterine sinuses. The uterus did not contract readily. Perchloride of iron and ice were used to arrest the hæmorrhage, and, when it had ceased, a silk suture was applied to the two edges of the uterine incision. The edges of the abdominal incision were brought together by interrupted silk sutures. The patient vomited at intervals after the operation, and only survived it fifteen hours and a half. The child, though vigorous when born, lived only four hours; but, on the *post mortem* examination of it, although it had lived this number of hours, and cried loudly, both lungs sank in water.

POST MORTEM EXAMINATION.—The pelvis showed an extreme variety of the rostrated form of deformity from osteomalacia. The lumbar vertebrae projected downwards and forwards into the pelvis to such an extent as to well explain how an exostosis was supposed to exist during life. The space between this projection and the back of the symphysis pubis measured only 2 4-12 inches. When the body was placed in the obstetric position, this measurement gave only 2 2-12 inches. From the spinal column to the body of the left pubic bone was 1 2-12 inch; on the right side, 8-12 inch. Between the bodies of the pubes (inside the rostrated part) was 8-12 inch. The greatest width of the brim was 4 9-12 inches. The width between the tuberosities of the ischia was 9-12 inch. From the lower part of the symphysis to the tip of the coccyx was 3 3-12 inches. From the latter point to the left tuber ischii, 1 3-12 in.; right, 1 6-12 in.

REMARKS ON TONGUE-BITING IN CONVULSIONS.

By Dr. HUGHLINGS JACKSON.

AT an autopsy, Dr. Hughlings Jackson remarked on the necessity of observing whether or not the tongue has been bitten in cases of cerebral hæmorrhage. Of course this should be done, when possible, during the life of the patient; but it is very often impossible to get a look at the tongue when a patient is deeply comatose. We may infer tongue-biting if we find blood on the gums. (Bloody foam may come from the lungs or the bronchial tubes.) The tongue was carefully examined by Mr. Robinson, the *post mortem* clerk, and it was clear that it had been bitten, chiefly on the right side. Sometimes the tongue is bruised but not lacerated, so that, during life, tongue-biting cannot be negated when there is no blood on the gums. Thus, at an autopsy a few weeks ago, Mr. G. E. Herman, the then *post mortem* clerk, discovered on one side of the tongue a plum-coloured patch of the size of a pea, which, after incision, was found to be owing to extravasated blood. In each of these cases there was a large clot in one side of the brain.

Dr. Hughlings Jackson believes that tongue-biting is of no value in diagnosis beyond this, that it signifies a severe convulsion. It occurs in young people and in old people, in uræmic convulsions, in convulsions from hæmorrhage on the surface or into the substance of the brain (whether the lateral ventricle be opened or not), and with hæmorrhage into the pons Varolii. It occurs in convulsions which begin deliberately by spasm of the face, arm, or leg, and in those chronic convulsions sometimes distinguished as genuine epilepsy. It occurs also in severe convulsion from organic disease of the brain; e.g., syphilitic nodules on the surface of one hemisphere. It may be said that, if we are called to a young patient who has had a severe convulsion, in which he has bitten his tongue, we should be right in the great majority of cases if we diagnosed epilepsy. This is true enough; and we should be mostly right if we made that diagnosis when we only knew that the patient had had a convulsion. The presence or absence of tongue-biting, for instance, is of no value in our attempts to determine whether a patient who has had a convulsion is suffering from epilepsy or from the effects of rupture of an aneurism of a large cerebral vessel.