stools, and a modification in the character of the defecations. At the same
time, the action of the remedy on the spinal cord removes the paralysed condi-
tion of the limbs. In such chronic cases of dysentery Dr Savignac prefers the
powder of nux vomica (a form not recognised in the British Pharmacopoeia) to
all other preparations of the remedy. He administers from 3 to 7 grains in
the twenty-four hours, and usually combines it with canella powder, whose
aromatic and tonic properties are useful in diminishing the intestinal flux.—
*Bull. Gén. de Thérap.*, Sept. 15, 1867, p. 193.

APHONIA OF NEARLY TWO YEARS' DURATION CURED BY ELECTRICAL STIMULA-
TION OF THE INFERIOR LARYNGEAL NERVE. BY DR PHILIPPEAUX.

Various methods of treatment had been unsuccessfully tried in a case of
aphonia which had originated two years previously, and which was supposed to
be due to paralysis of the nerves of the vocal cord. The patient was a healthy
female twenty years of age. It was ultimately decided by Dr Philippeaux to try
the effect of electrical stimulation, applied in such a way as to directly influence
the inferior laryngeal nerves. For this purpose, one metallic pole was inserted
into the lower and posterior portion of the pharynx, and the second was placed
on the skin over the crico-thyroid muscles. A current of considerable strength
was passed between these two points: almost immediately after the closure of
this current the patient started, uttered a loud cry, and began to speak with a
facility equal to that which she had possessed before the commencement of the
aphonia. Dr Philippeaux remarks that he has frequently met with success in
treating aponia by electricity, but never before had he the good fortune to
obtain so instantaneous and perfect a cure.—*Rêvèue de Thérap. Médico-Chirur-
gicale*, No. 16, 1867, p. 430.

OINTMENT FOR PRURIGO

Dr Charvet has found the following a nearly infallible cure for prurigo, after
an experience of twenty years:—

Axunge, simple or camphorated, . 60 parts
Citrine ointment, . . . . . 3 "
Mix.

A small quantity of this should be spread in a thin layer over the affected
surface, and it gives almost instantaneous relief. The dilution of the citrine
ointment in this preparation prevents the inconvenient and permanent staining
of linen which is otherwise caused.—*Bull. Gén. de Thérap.*, Aug. 30, 1867, p.180.

PATHOLOGY.

ON INFLAMMATION AND SUPPURATION. BY DR J. COHNHEIM, ASSISTANT IN THE
PATHOLOGICAL INSTITUTE OF BERLIN.

The author investigated the phenomena of inflammation in the cornea of the
frog, and found (1.) that it is not true that the stellate corpuscles enlarge and
form pus cells within themselves, either from their nuclei or cell contents; (2.)
that corneal opacity depends upon the presence of pus corpuscles within it; (3)
that the pus corpuscles are situated between the cornea corpuscles, and
that the former alter their form or position, while the latter do not. From
these observations he concludes that pus corpuscles must either be derived
from the pre-existing movable lymph corpuscle-like bodies in the cornea, or
have travelled into it from without. The latter view he deems correct. He
found that simple traumatic keratitis always begins at the margin of the cornea
and spreads inwards; also, by adopting Rechlinghauser's plan of colouring the
white corpuscles by the introduction of coloured solutions (Cohnheim used
aniline blue) into the lymph sacs, the veins, or the arteries, he satisfied him-
self that "the pus corpuscles in the inflamed cornea had formerly been white
blood corpuscles, and had passed into the cornea from surrounding vessels."
In order to ascertain how these structures escaped from vessels, he experimented on frogs, which he first paralysed by means of curara (a poison which, given in small doses, does not influence the circulation). He selected male frogs, and, by a particular arrangement, placed the mesentery under a microscope in such a way as not to interfere with the circulation. He found (1.) that the arteries become dilated; (2.) that more slowly, but to a greater extent, the veins undergo the same change; (3.) that the capillaries also become widened; (4.) that with these alterations the circulation becomes slower; (5.) that after a time, in the veins a peculiar change occurs. The layer of the blood stream, next the walls of the blood-vessels, instead of presenting the natural clear appearance, becomes filled with white corpuscles, which gradually accumulate, and move more and more slowly, until at length they stop; while the red column continues to move in the centre. But presently another change appears. "On the outer contour of the venous wall there appear small, isolated, colourless, bud-like elevations, as if the wall itself were forming small outgrowths; gradually these enlarge. After a time, the half of a spherical body of the size of a white blood corpuscle appears. This, after a time, becomes pear-shaped, the broad end from the apex pointing towards the vessel. From the rounded end numerous little processes project, and the corpuscles assume various forms. Above all, however, the mass separates more and more from the vessel, and at last we see a colourless, somewhat shining, contractile corpuscle with one long and several short processes;" in fact, a white blood corpuscle. This process goes on on many parts of the venous wall, which nevertheless remains intact.

When the capillary current is much impeded, a similar change occurs, but the red as well as the white corpuscles pass out.

The slowness of the circulation, and the accumulation of the white corpuscles, depend upon the dilatations of the vessels. How, in what way, and by what power, do the corpuscles pass out? Cohnheim finds that in the interior of the veins, capillaries, and arteries, there are stomata similar to those demonstrated by Rechlinghauser and Oedmanson in the walls of serous cavities, and that these communicate with canalicular spaces. It is by these openings that the corpuscles pass out. As to the power, he believes that it is by the peculiar ameba-like contractility that they escape.

During these processes he finds the rest of the tissue unchanged; the cells covering the peritoneum are unaltered, even when they are covered with a layer of lymph and pus.

These results, obtained by experiments on frogs, he has verified by examination on young rabbits and cats.

He would thus transfer the seat of pus-cell formation from the connective tissue to lymphatic glands.

In the conclusion of his paper he remarks that it will be necessary, in some degree, to modify the prevalent theories of acute inflammation—at least of that form which is accompanied by suppuration. "For this species of inflammation the vessels again come into the foreground. Without vessels no inflammation, dilatation of vessels, injection, and hyperemia, the necessary first stage. In vascular parts it is their own vessels, in non-vascular, those of surrounding structures, that supply, as in ordinary nutrition, the plasma; in inflammation the pus corpuscles, as a second requisite for the occurrence of suppuration, necessitate the presence of spaces which permit a moving forward, and an accumulation of colourless corpuscles"—and such spaces are formed by the connective tissue.—Virchow's Archiv, Sept.

ON CEREBRAL HÆMORRHIAGE. BY PROFESSOR BÉHIER OF PARIS.

In general, cerebral hemorrhage has been referred either—1st, to excessive pressure on the arteries of the brain; or, 2d, to diminution of the normal elasticity of the arterial walls. Thus, hypertrophy of the heart was long considered one of the principal causes of apoplexy. But when it exists as a compensating lesion,
cardiac hypertrophy can have no influence in producing apoplexy; although, if there exist peripheral obstacles to the circulation, from atrophy of the kidneys or diffuse induration of the arteries, the excessive vascular tension may possibly give rise to haemorrhage. Béhier thinks that atheromatous incrustations of the larger arteries play only a secondary part in the production of cerebral haemorrhage when no other morbid alterations exist; and that the same is the case in regard to mechanical obstructions, obliteration of vessels, compression of the jugular veins, and cerebral atrophy. He also controverts the opinions of Pariset and Rochoux, who considered softening of the brain as preliminary to haemorrhage, the vessels rupturing from weakness of their walls (ramollissement hémorragique). Cases of apoplexy so caused are excessively rare. The granular (fatty) degeneration of the cerebral capillaries, believed to be the principal cause of cerebral haemorrhage by Robin, Paget, and others, is stated to have been proved by M. Bouchard to be not a primitive, but a consecutive lesion, frequently the consequence of softening; and, in cases of cerebral haemorrhage, instead of preceding, results from the morbid process which follows the extravasation of blood. After rejecting all these presumed causes of sanguineous apoplexy, Professor Béhier states that a new cause of cerebral haemorrhage has been discovered by Drs Charcot and Bouchard. The alteration consists in small aneurisms of the capillary arteries of the brain, far different from those which occupy the larger branches, and which have been accurately described by Dr Gougenheim. The aneurisms alluded to are situated on vessels of a minute size. They consist in small ampullary dilatations, sometimes laterally developed, but generally fusiform. They are visible to the naked eye under the shape of dark red granulations, about the size of a pin's head, disseminated over the surface and in the interior of the brain. In the very centre of the clot one or more of these little aneurisms are found to exist, and their cavity communicates freely with the extravasation by an aperture, around which float the broken fragments of the external membrane. This opening resembles in every respect the ordinary ruptures, which allow an aneurismal sac to pour its contents into the neighbouring cavities. Dr Bouchard has observed that the blood sometimes collects between the external and the middle coat of the artery; at a later period the external coat itself gives way, and haemorrhage is then produced. The coagula contained in the aneurismal cavity are continuous with the clot which fills the cerebral focus. Since the time when his attention was first called to this subject, M. Béhier has discovered similar aneurisms in all the cases of cerebral haemorrhage in which he has been able to perform the post-mortem examination. This alteration, therefore, may be viewed as one of the principal causes of apoplexy. He does not pretend to say that it exists in every case, but he fully believes that, on proper investigation, it will be discovered in the great majority of cases.

PROFESSOR BÉHIER ON RIGIDITY OF PARALYSED LIMBS IN CASES OF CEREBRAL HÆMORRHAGE.

In certain cases of hemiplegia, the primary symptoms of the disease—viz., loss of motion and sensation—far from disappearing altogether, or even remaining stationary, are not unfrequently aggravated by the supervision of an entirely different class of phenomena. Violent pains and muscular rigidity invade the palsied limbs. How is this singular change to be explained? Formerly, it would have been supposed that inflammation had arisen in the immediate vicinity of the clot, or that the encephalic membranes were affected. But the clinical observer finds neither inflammation nor softening of the brain present; there is no fever, no acceleration of the pulse, no loss of appetite, vomiting, or coma. The brain, therefore, has nothing to do with the pains and rigidity. Are we to suppose that the spinal cord is affected? In old cases of cerebral haemorrhage there undoubtedly exist alterations of the medulla spinalis, consisting chiefly in a kind of descending atrophy. But in such cases there is inertia and flaccidity of the palsied limbs, not intermittent pains and spasmodic contractions.
"Dr Charcot and his pupil, Dr Cornil, by the results of their investigations, laid down in a paper read before the Biological Society in 1863, have thoroughly elucidated the difficulty. The muscular rigidity of hemiplegia affects various forms. In certain cases, the limbs are entirely contracted; the arm is pressed against the wall of the chest; the fingers are bent inwards, the nails leaving their mark in the palm of the hand; and the leg is half bent; while in others the limbs remain fadcid, the fingers and toes being alone contracted.

"We have now to inquire what the anatomical alteration is which corresponds to this series of phenomena. Both muscles and nerves have been carefully examined. The muscular tissue is partially atrophied. It is of a dirty yellow or brown colour; it has become soft, and its natural elasticity has greatly diminished. There exists, therefore, an important change in its nutrition; but this is the consequence, not the cause of the disease. But the state of the nerves has principally attracted the attention of Drs Charcot and Cornil. Their size has visibly increased; they are often twice as large as the corresponding nervous trunks on the opposite side. At the same time, their toughness and density are much greater than usual. Their colour is reddish, and their surface exhibits a fine network of capillary vessels. Lastly, when the neurilemma is examined, it is found to have grown very thick, and to adhere strongly to the subjacent nervous fibres. The partitions which separate the bundles of nervous filaments are equally grown very thick, and the nuclei of the sarcolemma have considerably increased in number. On the other hand, the bundles of nervous filaments have grown thinner than usual; but although disseminated in a mass of connective tissue, which compresses them, they retain their normal characteristics, and remain free from granular degeneration. It is therefore evident that, in cases of painful muscular rigidity supervening after the restoration of sensibility in the paralysed limbs, the nerves are swollen, if we may use the expression, by the undue thickening of their sheaths, while the nervous tubes remain perfectly sound, and therefore capable of receiving sensorial impressions and of exciting motion. If in the circle of morbid anatomy we look for a parallel, we shall find it in cirrhosis of the liver. The progressive hypertrophy of the connective tissue compresses and separates the nervous tubes in the first case, while it dissociates and strangles the glandular elements in the second. No doubt these alterations are carried to a higher degree in the liver than in the nervous trunks; but we must bear in mind that the causes which lead to hepatic disease—e.g., chronic intoxication—are generally constant and uninterrupted in their action, while in hemiplegia, whether connected with haemorrhage or with softening of the brain, the blow, once struck, is not immediately renewed, and the consecutive alteration of the peripheral nerves remains circumscribed within much narrower limits.

"Such are the facts of the case. It now remains to inquire how the sensation of pain is produced at a moment when the brain does not seem to be capable of perceiving sensorial impressions. Without entering here into a physiological discussion, it is sufficient to remind you that in general, at that stage of the disease, sensibility has been restored to the affected parts, although the power of motion still remains abolished. It is therefore easy to understand that pain may be felt, though motion is impossible. As to the muscular rigidity, it is no doubt principally connected with the local pressure exerted upon the nervous filaments, which, still retaining their vital power, are excited by the application of this permanent stimulus.

"In a preparation which exhibits the alterations just described, a transverse section of a sound nerve is placed by the side of a similar preparation in a diseased one, taken from a subject affected with hemiplegia. Both have been treated by a solution of carmine in ammonia. A deep red colour shows the place occupied by the nervous tubes, while the connective tissue which separates them remains white. It is seen that in the second nerve the bundles of filaments are merely separated by thin white streaks, while in the diseased one the neurilemma is exceedingly thick, as well as the internal partitions
which separate the fascicles from each other; and yet the nervous tubes, placed under the microscope, are found to be in a perfectly healthy state. The alteration therefore consists in an undue hypertrophy of the connective tissue, and may be viewed as *cirrhosis of the nerves.*"—Abridged from *Med. Times and Gaz.*, 1867.

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**SURGERY.**

**CAROTID ANEURISMS.**

The following is a brief resumé of a clinical lecture by M. Vanzetti of Padua on this interesting subject, on which he is already known as a high authority; it is too long for translation entire:

"The annals of surgery do contain certain cases in which spontaneous cures, or cures by the treatment of Valsalva, have been obtained in carotid aneurisms. I have lately seen an aneurism of the right carotid cured in this manner. A patient lately consulted me on account of swelling of his legs. On asking him about the previous state of his health, he mentioned, among other details, that, at the age of thirty-three, he had an aneurism of the neck, which had been cured without an operation. His own account of it was as follows:—He was a sausage-maker; one day, when lifting a pig from the waggon on his back, he made a great effort with his head to throw it backwards, and in a day or two another similar effort to throw off a large block of wood on which he chopped his sausages. To these efforts he attributed a pain soon after noticed in the neck, and at the spot of pain a tumour as large as a filbert. He consulted a doctor, who was also one of his patrons, and who alarmed him much by telling him that he feared he would chop no more sausages for him. He then consulted Dr Malago, professor of surgery, who told him, after consultation with many other professors, and in the presence of the pupils, that it was an aneurism of the carotid, and that an operation would be necessary. By this time the tumour pulsed strongly, was painful, and as large as a hen's egg. He refused to submit to an operation, consulted other surgeons in Verona and elsewhere, who all confirmed the diagnosis. He then returned home to the Tyrol, and put himself under the care of Dr Solizzoli, who confined him entirely to bed for eleven months, and allowed him to eat only a small loaf and a little soup each day, and that at three meals. He bore the torments of hunger with resignation, was reduced to skin and bone, but, at the end of nine months, the tumour ceased to pulsate, gradually diminished in size, and at length completely disappeared."

From the history it is almost absolutely certain that he had a carotid aneurism, and that, by Valsalva's method, it had been cured. No vestige of the tumour remained; both carotids pulsed, the right being perhaps the strongest.

Such cases of cure of carotid aneurisms, by Valsalva's method, are so excessively rare that we cannot rely on such treatment. Digital compression, however, has succeeded in three cases: one by Gioppi of Padua, in an aneurism of the ophthalmic artery; another by Vanzetti at Verona, in a similar case; and a third, recorded by Dr Sheppard of Worcester, in which an aneurism as large as a hen's egg, involving the bifurcation of the right carotid, was cured by interrupting digital compression, performed by the patient himself.

The following case is an example of an aneurism situated at the bifurcation of the right carotid, of only three months' standing, which, having become rapidly diffuse, had already filled up almost the whole side of the neck, rendering digital compression impossible, and obliging us to perform ligature of the vessel close to its origin.

J. G., age 60, peasant, three months before admission, felt a pain in the right side of the neck, and, placing his hand on the spot, discovered a pulsating tumour. The size of the tumour, and the pain in it, increased in equal