secretion of bile, it would only aggravate instead of benefiting the case. The beneficial action of mercury, besides its purgative effect, seems to me to be exerted on the mucous membrane of the bile-ducts; as the catarrh is subdued, the swelling subsides, and the pent-up bile overcomes the obstruction and enters the bowel; the accumulation causing its appearance in the fæces in even larger quantity than the normal continuous flow. The curative effect of mercury is seen on other mucous membranes affected with catarrh, especially those of the alimentary canal; in conjunction with small doses of opium, it is one of the commonest and most successful prescriptions for catarrhal diarrhoea; it is also often useful in gastric catarrh, and it was formerly thought indispensable in the treatment of bronchitis and laryngitis.

A commonly observed tendency of catarrhal inflammation is for it to attack several tracts of mucous membrane at the same time. Thus a patient whom I lately saw had at the same time catarrhal ophthalmia, bronchial and gastric catarrh, and slight albuminuria, which, as he soon recovered, probably depended on catarrh of the renal tubules. A combination of bronchial and gastric catarrh with some pyrexia of the remittent character before mentioned, forms the very frequent complaint popularly but incorrectly called influenza—a term which should be restricted to the epidemic disorder. Gastric and oral catarrh so frequently coexist that a coated tongue is looked upon as a sign of a foul stomach, which it generally is, although in the commencement of gastric catarrh the tongue is sometimes clean when first seen, becoming white by next day; while the tongue is very foul in cases of catarrh of the mouth, fauces, and pharynx, where the stomach is nearly or quite unaffected. This sympathy between different mucous membranes is to be attributed partly to the inflammation spreading by continuity of texture, and partly to community of cause, whether this be an external irritation or an intrinsic derangement of the system.

The causes of catarrh may be thus classified.—

1. First, and perhaps most frequent; is direct irritation; the most frequent irritants to the conjunctiva and respiratory tract of mucous membrane being cold air, very hot air, and foreign matters, as grit and dust; to the alimentary canal, the common irritant is improper food, either indigestible in quality or excessive in quantity, the undigested residue becoming putrid and acrid.

2. Chilling of the skin, especially from wet feet, seems to cause catarrh apart from the local irritant action of cold, by inducing congestion of the internal parts of the body.

3. Catarrh, as aforesaid, is often propagated from one mucous membrane to another.

4. Many constitutional diseases, as measles, enteric fever, syphilis, and influenza, are accompanied by catarrhal affections of particular mucous membranes, especially the respiratory.

5. A varying amount of catarrh of a part very often accompanies organic disease of that part; the permanent disease acting either as a local irritant, or by inducing congestion; thus chronic gastric catarrh usually accompanies ulcer and cancer of the stomach, and emphysema is often complicated with bronchitis.

Lastly, congestion of an organ from obstruction to the return of blood, causes catarrh; thus we have diarrhoea with portal obstruction, and bronchitis when the pulmonary circulation is impeded by disease of the mitral valve.

Since in a healthy subject catarrh tends to quick recovery when the cause producing it is removed, the persistence of catarrh in a chronic form shows either that the original cause or some other irritant is still in operation, or else that there is a deficiency of reparative power either in the part or in the whole system. The relaxation of tissue and of the blood-vessels produced by repeated attacks of catarrh, is favourable to the development of the chronic form; so, also, is a watery condition of the blood; and especially so that general deficiency of the tissues in plastic power which is termed the scrofulous diathesis. Chronic catarrh, in its turn, is very liable to acute exacerbations.

In the treatment of acute catarrh, it is to be borne in mind that the disease tends to get well of itself, if not prevented by the persistence of the cause; where this cause is still present, but removable, as foreign matter in the eye, or undigested and putrefying food in the primæ viæ, our first efforts must be directed to get rid of it, and in every case we must watch that no fresh irritant gains access to the suffering organ. If the inflammation tend to increase, or if it be situated in a part essential to life, it becomes our duty to endeavour to diminish it, for which purpose we often seek to produce a derivation of blood from the affected part by augmenting excretion in some other organ, particularly the skin and bowels. Of antiphlogistics, the local action of cold in the form of ice, where it is applicable, as in acute catarrh of the throat and stomach, is of much benefit in many cases. Certain drugs have also a reputation as antiphlogistics; of these, mercury has been mentioned before; antimony and the neutral salts appear to act favourably by

loosening the secretion, and the same virtue is claimed for the alkalies, which certainly have the power of rendering mucus less viscid when added to it out of the body. In catarrh of the primæ viæ, alkalies and antacids are generally of benefit, and the expectorant action of ammonia is probably due to its passing off by the lungs, and acting on the mucus in the bronchial tubes on its way. The irritability of the mucous membrane often needs to be allayed by sedatives; the surest generally being opium. Should the catarrh, instead of passing clean away, become chronic, local astringents are of the greatest use, and among them nitrate of silver, sulphate of zinc, alum, and tannin are the chief. Nitrate of silver is often of marked use in the chronic gastric catarrh accompanying organic disease of the stomach. At the same time, it is to be borne in mind that the fact of a catarrh passing into a chronic state, unless due to persistence of irritation, shows that something is amiss with the constitution; hence our aim must be to improve the general health, and this will usually be best effected by tonics, especially iron; and in the scrofulous, cod-liver oil. Prophylactic treatment against catarrh consists: 1, in avoiding sources of irritation, as cold, errors in diet, etc.; 2, in keeping the body in the highest attainable state of vigour; 3, where it can be borne, in a gradual process of inuring the body to cold, of which process a cold bath every morning, begun in the summer, is the safest, pleasantest, and most efficacious form.

TWO CASES OF HYDROPHOBIA TREATED BY HYDRATE OF CHLORAL.

By HENRY W. T. ELLIS, M.R.C.S.Eng., L.R.C.P.Ed.,
Crowle Hall, Doncaster.

On Tuesday, the 18th of this month (April), I was sent for to visit Albert P., aged 7 years, who, three weeks previously, had been bitten in the face by a stray dog, one of the bites involving the inner canthus and conjunctiva of the right eye. I was told that he had complained the day before of being poorly; his parents, however, looked upon the attack as a slight febrile one from cold, and took no further notice than to give him an aperient. His anxious and frightened expression of countenance at once powerfully struck me; and, upon finding that he dreaded the sight of any fluid, and could not be got to swallow it, the fact was quite evident that I had to deal with a case of rabies, this characteristic symptom, denoting an affection of the oesophageal branch of the eighth pair, being so well marked. His pulse was quick; the tongue was covered with white fur. He was restless and fidgety, and refused food as well as drink; and, on attempting to make him swallow a little tea, the effort brought on a violent spasmodic constriction of the throat; even the sight of the cup excited agitation and aversion, but he did not complain of much pain in the bitten parts. Knowing the inefficiency of all treatment in this frightful disease, I determined upon trying the hydrate of chloral, at any rate in the hope that it would in a measure control the violence and excitement that might, in the next stage, be expected to follow; and in this I am happy to say I was not disappointed, for it certainly mitigated the symptoms very considerably. The remedy was administered in doses of a teaspoonful of the syrup, diluted with a little water, every two hours, and subsequently every hour. Of course, considerable difficulty was experienced in the effort to swallow; but it is believed that most of it was got into the stomach. In the way of progress, the disease, notwithstanding, went on unchecked. On the second day, the sense of touch was most painfully excited by the slightest application of the finger to the face, even the teaspoon coming into contact with the lip produced a catch in the respiration, showing, I presume, that the recurrent nerve was affected. The pupils became widely dilated; the tongue more thickly coated; there was a continual desire to be walking about, which apparently produced some relief, the lungs evidently not being much oppressed. On the third day, the little sufferer talked almost incessantly, often incoherently, but there was little tendency to violence or vicious impulse. The hydrophobic slaver, thick and tenacious, began to accumulate, and, when it was not got rid of by spitting, occasional vomiting took place, which relieved for a short time. He, however, gradually became weaker and unable to eject it, sinking from apnoea at 4 A.M. on the fourth day after the characteristic symptom was developed.

The other case to which I was called on the following day, was in a little girl, Alice Mary M., aged 5 years, bitten at the same time in various parts of the face and head. The symptoms and treatment were nearly identical; but, on the third day, there was for a short period, at 2 P.M., some violence, controlled, however, entirely by the chloral hydrate, which had been rather neglected. During this time, the poor little creature screamed out loudly, and said that her parents were kill-

ing her; and she required restraint. The saliva then began to collect, and was at times ejected, but soon began to run out of the corner of her mouth. A period of perfect calm then came on, and continued until her death, in my presence, at 7 P.M. the same evening; she sank apparently more from asthenia than from apnoea.*

The painful history of both these cases, pointing, as it forcibly does, to an affection of the brain, especially the medulla oblongata, central and spinal nerves, makes it quite clear (at least to my mind, and I devoted much time and attention to both cases) that the agonising sufferings of the subjects of this horrible disease were considerably alleviated by the means employed, and although unsuccessful in warding off a fatal result, it was satisfactory to find that the friends of the poor little sufferers fully appreciated the beneficial effect of the remedy employed.

RUPTURE OF THE UTERUS.

By W. B. KILBURN, Surgeon, West Auckland.

ABOUT 1.30 on the morning of the 15th ultimo, I was summoned to attend Mrs. S., then in labour with her seventh child. On arrival, I found that she had been in labour since 12 P.M. The membranes were ruptured, and the foetal head was so impacted that I was unable to pass my finger between it and the pelvis. In about two hours, the pains began to slacken, and in another hour ceased; they were, however, replaced by a fixed, dull, heavy pain, slightly increased upon pressure, immediately below the umbilicus. There had been no sudden outry, nor vomiting, except once of a little warm brandy and water which I had just given, or faintness. Apart from the pain, there was no untoward symptom, save a weak and compressible, but quite regular pulse. I administered liquor opii sedativus and brandy. In two hours, finding that adequate relief was not obtained, I determined to deliver by forceps. This was easily accomplished. The placenta was expelled naturally, and there were slight after-pains, but no hæmorrhage, not even as much as there generally is after a natural labour. There was slight faintness after delivery, for which, and the after-pains, I ordered liquor opii sedativus and brandy, with the best effect. I stayed about an hour after delivery, and when I left the patient she was doing very well. In the early part of the afternoon, she had quite recovered from the shock, had taken some light aliment, and passed urine naturally; the ventral pain, also, had quite left her. I was called up about 3 A.M. the next morning to see her, and found that she was again suffering from the ventral pain, but it was much aggravated. I ordered opiates, hot bottles to her feet, and warm applications to the seat of pain. At 8 A.M., there being no relief, hydrate of chloral was administered, without effect; and at 9.30 A.M., she died. (No ergot was given to the patient.)

REMARKS.—This case, I am inclined to think, is not less interesting than some recently narrated, inasmuch as the patient partially recovered, though what caused the sudden recurrence of the pain, I was unable to ascertain. Most of the symptoms of rupture were absent, and those present were only partial. Owing to the ignorance and superstition of the relatives, there was no autopsy, so that I am in the dark as to the *post mortem* appearances. I may here state a few particulars concerning the family history of my patient. Of seven children, there is only one living; four were stillborn, one of which was malformed and putrid; twice she was delivered by forceps. For some months after her first confinement, she was under treatment for spinal disease; she had lateral curvature of the spine, lateral contraction of the pelvis, and her gait was limping. She was short and stout, though always pale and anæmic looking. Her mother also died from rupture of the uterus.

CLINICAL MEMORANDA.

PERITONITIS MERETRICUM.

REFERRING to the paper by Mr. Giles, in the BRITISH MEDICAL JOURNAL of this week, on the association of gonorrhœa with peritonitis, I would venture to suggest that a not uncommon cause of peritonitis among females of that class is found in the prevalence of a practice of interfering with the menstrual discharge just at its inception, or during its course. I have myself on several occasions attended women for ovaritis and peritonitis, resulting, as I believe, from the application of cold to repress, or the introduction of sponge to conceal, the existence of the catamenia. This latter practice I discovered in making a vaginal examination in a case, and finding what certainly was a foreign body. All those cases (the one alluded to especially) were obstinate and slow of recovery.

R. W. EGAN, L.R.C.S. Ireland, L.R.C.P. Edin.

Dublin, April 29th, 1871.

GNORRHŒA AND PERITONITIS.

I HAVE read with much interest the remarks of Mr. G. F. Giles, in last week's JOURNAL, on gonorrhœa and peritonitis. The remarks are of considerable practical importance, but the idea seems to have struck other writers as well as himself. I notice in Dr. West's book on *Diseases of Women*, published in 1858, that, speaking of acute uterine inflammation, he says: "I have seen it come on with great severity in the course of gonorrhœa; the tendency, indeed, of inflammation of the uterine mucous membrane to extend along the Fallopian tubes and attack the peritoneum, is much stronger than to affect the substance of the organ." From this extract it would appear that Dr. West was familiar with the fact that gonorrhœa in the female might produce peritonitis. It is an additional evidence of the correctness of Mr. Giles's observations.

NELSON DOBSON, F.R.C.S.

Clifton, May 2nd, 1871.

PROFESSOR FLOWER'S HUNTERIAN LECTURES ON THE TEETH AND ALLIED ORGANS IN THE MAMMALIA.

Delivered at the Royal College of Surgeons of England.

LECTURE XI.—Monday, March 13th.

IN the Rhynchocyon and Macroscelides (Elephant Shrews), the front teeth, both incisor and canine, are very small. In the Rhynchocyon, there are no incisors in the upper jaw in the adult animal; in the young, three small incisors are present, but they disappear. In the lower jaw, there are three incisors on each side, with a gap in the centre. The molars have four pointed cusps, generally with an indication of a ridge connecting the two anterior and the two posterior cusps.

The Tupiidae, inhabiting the south of Africa, are very like squirrels in form; they live in trees, and are mostly insectivorous. Their molar teeth have the **W**-pattern. They have large upper incisors, like Shrews; the lower incisors are long and procumbent.

An extremely aberrant form of tooth is found in the Galeopithecus, an animal of which there are only two species, inhabiting some parts of South-Eastern Asia. The Galeopithecus is rather larger than a Cat, and has a sort of parachute on each side, which it uses in passing from one tree to another. It has sometimes been inappropriately called the "flying Lemur"; it has also been placed among the Chiroptera, but wrongly, because the wings of Bats are formed on an entirely different plan. Not much is known as to the food of the animal; it has been described both as insectivorous and as frugivorous. In the upper jaw, there is a large vacant space in front. Beyond this are two curious teeth; one a single-rooted tooth with three pointed cusps, and the other a compressed tooth with two roots and many cusps; both these are usually reckoned as incisors. Next comes a tooth in the position of the canine, much resembling the second incisor. The molar teeth have pointed cusps, and show a kind of modification of the **W**-pattern. In the lower jaw, there are on each side three incisors; the first two project forward, and are single-rooted, and their crowns are pectinated or comb-like, being widened at the neck, and divided by deep grooves into a number of denticles; of these denticles there are generally seven or eight in the first incisor and ten in the second. The pulp-cavity sends a branch to each denticle. It is very difficult to give the reason of this arrangement; something approaching it is seen in the Lemurs. The third lower incisor is merely notched. There are a canine, two præmolars, and three multicuspid molars, presenting an approach to the **W**-pattern.

Chiroptera form a well defined order; they approach Insectivora nearer than any other animals in the structure of their teeth, being mostly insect-feeders. Nearly all have many teeth; and the canines are in all well developed and functional, even where the incisors are large; in most, the incisors are comparatively small. The molars have a greater or less number of sharp cusps.

The order is divided into two sections or suborders—the Insect-eating and the Fruit-eating Bats. The Insectivorous Bats are further subdivided, according to the character of the nose.

Of the smooth-faced Bats, the common English Bat (*Vespertilio*) may be taken as the type. In the upper jaw, on each side, are two very small incisors; these are succeeded by a space, after which comes a very large and long canine, with a cingulum. Next to this are two small præmolars, and a large one with three roots and one cusp; there