exciting cause of irregular recurrence, all trace of periodicity is lost. The patient does not know when to expect his attack. He may have one in a twelvemonth, he may have one to-morrow, he may have four in a month, he may go years without one; it may never occur at two intervals alike, and when it does occur he is perfectly at a loss to say why it should choose that particular period. The time of its recurrence and its frequency are alike inexplicable. He may be living in perfect health and daily dread.

To express summarily, then, what appear to be the facts with regard to the periodicity of asthma, we may say—

1. That asthma is typically periodic.
2. That, though there is a period for each case, there is no particular period for the disease in general.
3. That the periodicity of asthma is of two kinds, *intrinsic* and *extrinsic*, the latter a spurious periodicity, dependent on the periodic recurrence of the exciting cause; the former, the true essential periodicity, independent of all external circumstances.
4. That periodicity, though a common, is not a universal feature of asthma.

DIPHTHERIA.

By ROBERT S. CROSS, Esq., Petersfield.

I BEG to submit the annexed remarks, with the idea of fulfilling one great purpose of our Association—the recording of individual observation, with a view to building up experience deduced from facts.

Throughout these last eighteen months, this town and neighbourhood have been visited by throat-disease in various forms; considerably above a hundred cases, of a diphtheritic character, having occurred under my observation, varying in character from the mild form, in which small spots of white easily detached lymph or exudation membrane, on more or less enlarged and inflamed tonsils, was the type; little or no constitutional disturbance being present; to the most severe kind, suddenly ushered in by severe symptoms of exhaustive febrile action; the tonsils, uvula, and whole of the parts at the back of the mouth as low down as could be seen, were coated with a dirty white, or brown grey, firmly adhering membrane; life being destroyed in a few days, sometimes by extension to parts necessary for respiration, but as often by apparently a state of exhaustion of the system being induced, in which death occurred sometimes very unexpectedly.

Two cases (in one family, of six children, the oldest eleven years, and all of whom, with the exception of the infant, had the disease) were sufficiently remarkable to deserve a separate notice. In two boys, aged respectively eight and nine, the throat symptoms were very severe from the first. About the fifth day, healing set in; so rapidly, that, by the end of the seventh, a sloughing ulcer, which had embraced the whole of the parts at the back of the mouth within the reach of observation, were quite well. One day only of apparently perfect convalescence intervened; and vomiting set in, with pain and tenderness over the epigastrium, extending particularly to the hepatic region. There were constipation; total loss of appetite; prostration; rapid emaciation; thirst; and, in one case, there was intense pain in the head for the last forty-eight hours. One boy died at the end of three weeks of such condition; the other, at the end of ten days.

A very careful *post mortem* examination of the last case was made. The tonsils appeared gone; *i.e.*, their site was occupied by some loose irregular granulations, which had the character of remaining, the interstitial structure being absent. There was no extension of the disease into either œsophagus, or larynx and trachea. The lungs were healthy. The liver was enlarged and pale. The stomach contained about half a pint of greenish viscid fluid. The mucous membrane, particularly at the edges of the rugæ, which were very prominent, was of a deep chocolate, almost mahogany colour; the colour was not distributed in patches, although there were degrees of depth of shading, varying from this to deep rose colour and red, but pervading the whole, and extending a long way—I should say, throughout the whole of the small intestines, most intensely in the duodenum. The mucous membrane was softened and thickened, and presented at the two orifices an appearance of a separation, as though it might readily be detached.

The disease in question has occurred in all situations and among all classes. The mortality has been about ten per cent.

of the whole. This ratio, I should remark, includes as well those cases in which application has been made too late to offer any reasonable chance of doing good, as it does those in which everything has been done from the very first moment of attack. As to contagion, I have been unable clearly to trace this cause in more than one case; as in those families where two, three, or more children were the subjects of the disease, the cases have occurred at such intervals as to preclude the idea of such being the exciting cause; and, moreover, often only one has had it, even where the discovery was made too late for any attempt at isolation. One adult has died; and one who had it, had been nursing a child with angina, she herself having been the subject of scarlet fever since adolescence. Albumen has been sometimes present in the urine; sometimes not. I should say, that on the average the subjects of the malady had not been remarkable for their apparent vigour of constitution, but rather the least robust and healthy of the community.

The treatment has consisted of sulphate of zinc or ipecacuanha emetics, with a mild calomel purge, followed by mineral acids, with bark or quinine; sometimes citric acid, chlorate of potass, tincture of sesquichloride of iron, etc.; with applications of nitrate of silver, solid and in solution (five grains to one drachm); solution of chlorinated soda, hydrochloric acid, etc., diligently applied by sponges, and gargles of like character: externally, an embrocation of compound camphor liniment, soap liniment, and laudanum. Leeches were applied in one case, followed by a blister, which caused a most unhealthy sloughing sore, which undoubtedly accelerated the end. And here I may mention one unfavourable symptom always attendant on the severer forms; *i.e.*, a filling up from ear to ear under the chin, with a hard, tense, brawny kind of shining swelling, corresponding to a similar infiltration of all the internal parts.

The diet has consisted of beef-tea and nutritious bland nutriment, with wine, according to its apparent necessity. On the first and second day, if given, wine appeared to aggravate the constitutional irritation already severe; and in like manner, about the third day, when the exudation membrane was beginning to separate, allowing the escape of a highly offensive discharge. Caustic or any pungent application to the throat seemed to do harm from the same cause.

DIPHTHERIA.

By GEORGE BOTTOMLEY, Esq., Croydon.

MANY valuable records of cases have appeared almost weekly in the medical periodicals for months past, mostly differing from each other as to the nature of the epidemic, as well as to the mode of treatment. It would, therefore, be highly desirable that some better defined pathological character of the disease should be agreed upon by the medical profession, and also a general plan of treatment laid down, as in all other diseases.

It appears that, at present, we cannot do more than give our individual opinions, founded upon practical experience.

In the first place, it may be remarked that the disease assumes very nearly the same train of symptoms in all places.

From what has been written upon the subject, it appears that some believe it to be a new disease; others, that it is accompanied with scarlet fever. It therefore becomes our duty, if possible, to find out which view is correct.

In discussing the nature of this disease, its pathological character should be settled; but, having had but one fatal case in my own practice, my experience from *post mortem* examinations will not do much. I can, therefore, only offer my opinion from the cases I have had under treatment.

It appears to me that at the commencement of the attack there is but slight congestion of the mucous membrane of the pharynx, accompanied with slight constitutional disturbance; but, in a few hours, the membrane puts on a livid appearance, and runs rapidly into the gangrenous state; and that the false membrane is a deposit of layers of lymph in the early stage of the disease, which soon loses its vitality, and acts as an extraneous body, thereby preventing the parts from performing their natural functions. Accompanying this change, great depression of the vital powers of the system takes place.

Now whence arises the rapid and fatal change in a few hours? Is it not from meteorological causes? for it is certain that locality has but little to do with it. It has been as severe in high and dry situations as in low and damp; in isolated

dwellings, and in crowded cities; in clean and well drained places, and the reverse. Therefore, ought we not to look to the atmosphere as producing those rapid changes, acting upon the blood, occasioning the gangrenous condition of the throat, accompanied with an extremely low and depressing type of fever, from which the patient rapidly sinks into a state of extreme and fatal exhaustion? It therefore appears consistent with pathology to administer a most powerful antiseptic remedy, to act promptly both locally and constitutionally. After taking the above view of the disease named by Bretonneau *diphtherite*, I beg to submit to my medical brethren the plan of treatment which, I am happy to say, I have found very successful.

I had under my care several severe cases in the autumn of 1857, and again in the autumn of 1858. Those in 1857 occurred in the town and neighbourhood of Croydon, and those in 1858 in a new building, an asylum for the reception of children whose parents died young: consequently, their offspring were not constitutionally the best fitted to resist so formidable a disease.

The treatment I adopted in all the cases under my care was as follows—for children:—

℞ Solutionis chlorinii ʒss; syrupi simplici ʒss; aquæ destillatæ ad ʒvj. M. Fiat gargarisma sæpe utendum.

℞ Solutionis chlorinii gtt. iv; syrupi aurantii ʒj; aquæ destillatæ ad ʒss. M. Fiat haustus 2ndâ quâque horâ sumendus.

The dose was increased according to age. Calomel was given in doses of one grain and upwards, according to age. The diet, too, consisted of concentrated jellies, strong beef-tea, wine, etc.

The same mode of treatment was adopted in adult cases; except that, instead of calomel, I gave the hydrargyrum cum cretâ.

For many years I have ordered the chlorine solution in malignant scarlet fever accompanied with a diphtheritic state of the throat, with marked success. In the *Cyclopædia of Practical Medicine*, published in the year 1835, Dr. Tweedie states that, in an epidemic sore-throat which made its appearance in Tours in 1818, and to which Bretonneau gave the name of *diphtherite*, hydrochloric acid was found most efficacious.

The orphan asylum to which I have before alluded is a new building erected on the top of a hill, open to the south-west; the rooms spacious and lofty; every attention paid to ventilation. It stands alone, in a most healthy situation; and the children, before admission, undergo a medical examination; so that, at the time of admission, they are perfectly healthy. So that does away with the supposition of its being confined to ill-drained, low, and swampy situations, and densely populated, poor localities. In the months of July and August, 1858, there were fifty cases in the above asylum, of the most malignant form. They were all placed under the treatment before named. After the third day, quinine was added to the chlorine solution. Many were covered with the scarlet eruption; eighteen had a severe form of measles; and some few were free from eruption; but all had the diphtheritic throat, and but one case out of the fifty proved fatal—a child four years old. The disease made its way through the various tissues of the throat and neck, and broke externally, giving vent to a most offensive discharge, the patient sinking from exhaustion, not being able to take sufficient stimulant and nourishment.

DIPHTHERIA.

By J. C. S. JENNINGS, Esq., Malmesbury.

THERE are a few points in the summary of cases published in the *BRITISH MEDICAL JOURNAL* of June 25th, to which I wish to advert, while completing a tabulated report of cases of diphtheria attended by me for the last two years, although I can, in truth, add but little as regards its treatment to the outline which I gave in the *JOURNAL* of March 27th, 1858.

Presence of Contagion. Of this I have had such clear proof ever since the first outbreak of diphtheria in the parish of Shipton Moyne, that I have had no hesitation in declaring its contagious character: in fact, in the first case which came under my care in that parish, the disease was clearly contracted by nursing and attendance on an adult who rapidly sank under it. Moreover, two of his brothers-in-law, residing a mile distant, contracted the disease either from a casual visit, or by attending the funeral.

Scarlatina. At the first outbreak of the disease, no cases of the above had appeared in the neighbourhood; nor were

there any until the second outbreak, during the month of January of this year, when a few cases of diphtheria occurred; but scarlatina maligna ran through several families. In those cases, however, in which the rash was well developed, and not suppressed, there was little or no throat-affection; and *vice versa*: and when the tonsils were affected, there was not the peculiar leathery exudation of diphtheria.

Treatment. The plan I have invariably adopted, regardless of sex, age, or incubation of disease, has been to give an active emetic of antimonial wine, from half an ounce to an ounce, according to age; to freely cauterise the throat with solid nitrate of silver; to have a mustard poultice applied from ear to ear; the feet and legs plunged in a hot bath; and the patient confined to bed. After the emetic action has ceased, from three to five grains of calomel with five of compound extract of colocynt were given (or, for a child, two grains of calomel with two grains of compound antimonial powder); and, four hours afterwards, the following mixture:—

℞ Quinæ disulph. ʒss; potassæ chloratis ʒj; acidi hydrochlorici diluti ʒss; aquæ ʒviij. M. Fiat mistura cujus sumatur pars sexta 4tis horis.

A gargle of chlorine solution was directed to be used frequently, prepared by impregnating water as much as can be borne with the protoxide of chlorine, generated from two parts of chlorate of potass, one of hydrochloric acid and one of water, and the fauces to be sponged out frequently with the same. The emetic I have rarely repeated more than once; but when the inflammatory stage has been severe, the fauces tense and shining, and the throat œdematous, spirit of nitrous ether and liquor of acetate of ammonia, or nitrate of potass, has been added to the mixture.

The diet has been at first farinaceous, and afterwards consisting of strong broths and jellies. Stimulants have been very rarely administered, and then only as sherry whey, alternately with the quinine, which I have trusted to as the sheet-anchor. For infants, quinine may be given in jelly, washed down with a mixture of tincture of sesquichloride of iron.

Upon this plan all my cases have been successfully treated, with the exception of one fatal case in a stout young man, where much valuable time had been allowed to elapse; the mushroom-like exudation having extended over the soft palate, completely blocking up the fauces and chink of the glottis; besides which, the emetic was not rightly administered, or failed to produce effect; neither was the purgative given as ordered; and the patient died from apnoea, suffocation being produced from spasm of the glottis when turning to lie down in bed.

Too much stress cannot be laid upon tartar emetic, quinine in large doses, and the avoidance or guarded use of alcoholic stimulants.

WOUND OF THE LIVER: PROFUSE HÆMORRHAGE: RECOVERY.

By ALBERT G. WALTER, Esq., Pittsburgh, Pennsylvania.

JOHN KOHRSEN, roofer, aged 47, of Pittsburgh, of bilious constitution, large frame, and strong muscular development, was brought to my hospital late on the evening of January 17th, 1858, having been stabbed by his wife in the scrobiculus cordis with a broad-bladed knife, entering the abdomen obliquely upwards about four inches. Withdrawing it himself, he walked some distance while bleeding profusely, and fell down exhausted upon the pavement. A surgeon summoned found a vertical wound, of an inch in length, close to the right side of the ensiform process, from which venous blood, in a rapid, continuous, and large stream, was issuing. On introducing his finger into the cut, a deep rent was discovered in the concave surface of the small lobe of the liver. This profuse flow of blood was arrested by compression through the abdominal walls upon the aorta.

Arrived at the hospital, the patient was cold, very pale, with respiration not accelerated, and slow and hardly perceptible pulse, yet restless, outward bleeding having ceased. He suffered great pain in the wound, increased by swallowing, moving, and deep inspiration; with paroxysms of cramps in the abdomen, shooting from the scrobiculus cordis to both angles of the scapula, and returning every quarter of an hour, during which the skin around the wound would swell out to the size of a pigeon's egg, as in ventral hernia. The wound was left open; the body was inclined towards the right side, to facilitate the outward flow of blood; ice in bladders was applied to the abdo-