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 ℥ss; syrupi simplici ℥ss; aquæ destillatæ ad ℥vj. M. Fiat gargarisma sæpe utendum.

℞ Solutionis chlorinii gtt. iv; syrupi aurantii ℥j; aquæ destillatæ ad ℥ss. 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. 3ss; potassæ chloratis ℥j; acidi hydrochlorici diluti ℥ss; aquæ ℥viij. 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-

men; opium in one-grain doses given hourly; and the greatest quietude enjoined, with abstinence from drink as much as possible. He slept some during the night, though frequently roused by the paroxysms of pain. Next day, the pulse was slow and very small; the skin cool; thirst great; with vomiturations and frequent attacks of pain, which were relieved by relays of leeches around the wound, and the continuance of one-grain doses of opium every half-hour or hour. Motion of the body and deep inspiration could now be performed without pain; the pulse began to rise, the thirst to decrease, and the abdominal tenderness to subside.

On the evening of the third day, however, violent colicky pains of the hypochondria, extending to the groins and shoulder-blades, with eructation of wind and tumescence of the scrobiculus, set in, recurring in paroxysms, which were subdued by ten grains of calomel, followed by castor oil with turpentine as a laxative, bringing away large quantities of dark, greenish, and very offensive stools. Tumescence and tenderness of the liver, with effacing of the intercostal spaces, flatulence, dry hot skin, great thirst, dry tongue, icterus, bitter taste, now appeared: pulse and respiration remained unaccelerated. By free and repeated leeching of the region of the liver, with the internal use of calomel and henbane, carried to moderate ptyalism, and an occasional laxative, the inflammation of the liver gradually subsided. The wound, though not interfered with, closed by first intention; no more bleeding having taken place. Hepatitis was next followed by parotitis of the right side, which yielded to leeching and warm emollient applications; when inflammation of the inguinal glands of the left groin made its appearance, but without consequences. In three weeks the patient left his bed, and two weeks later the hospital, restored to health, yet liable to ventral hernia, unless restrained by the wearing of a truss.

REMARKS. The successful termination of the above injury, endangering the life of the patient by profuse bleeding, peritonitis, and hepatitis, is due to the great power of opium in preventing and arresting peritoneal inflammation. Under its benign and powerful influence, traumatic injuries of the abdominal cavity and its organs, which would otherwise mostly prove fatal, are borne with remarkable impunity. There is no remedy as safe and true a handmaid to the surgeon as opium; there is none whose aid to him is as valuable.

It was considered proper not to close the abdominal wound, but to encourage the outward flow of blood by position of the body, before arresting the bleeding by pressure upon the abdominal aorta. By closing it, accumulation of blood in the abdominal cavity would have taken place to a great extent, to be followed by consequences which might have been serious.

Opium did not prevent hepatic inflammation, the result of the direct injury of the liver; but it timely checked peritonitis—a far greater enemy to the surgeon than the former.

The appearance of parotitis of the right and bubo of the left side does not seem to bear any relation to the injury of the peritoneum and liver, but may be considered the effect of ptyalism, induced for the relief of the hepatic inflammation.

Transactions of Branches.

SOUTH-EASTERN BRANCH: ROCHESTER, MAIDSTONE, GRAVESEND, AND DARTFORD DISTRICT MEETINGS.

DIPHTHERIA.

By THOMAS HECKSTALL SMITH, Esq., St. Mary Cray, Kent.

[Read May 20th, 1859.]

I PURPOSE in this paper to give a few practical remarks, the result of my own observation of cases, as to the treatment and apparent nature of diphtheria. The time allotted at this meeting will not admit of more full investigation of the subject, either as to its history or the opinions of others.

In the year 1857, I had in my practice three cases of diphtheria, each a mile or two miles distant from the other. They were sporadic cases: no others occurred. All were in the better ranks of life. One was a governess in the family of a clergyman; one was the wife of another clergyman; the third was a gentleman of rank well known in the county. They presented three distinct characters of the disease.

CASE I was that of a delicate young lady, aged 23, subject to

relaxed sore-throat. There were many patches, somewhat elevated, on each tonsil, as if greyish peas had been split and pressed into the part; the surrounding parts having a blush only of red. There had been no rigors; the pulse was quiet, very feeble; the countenance and skin were anæmic.

CASE II. A healthy lady, aged 30, of somewhat full habit, but who once had erysipelas, presented the membrane formed on both tonsils, the velum, part of the tongue and cheek, of a deep ash colour. On removing a portion of the membrane, which was loose, from the tonsil, the parts under were found to be nearly of chocolate colour—so intense was the congestion. The breath was fetid; there had been slight rigors; the pulse was now quiet, easily compressed.

CASE III was that of a healthy man, aged 53, with some tendency to gout. In this case, both tonsils were partially covered with patches, but with acute tonsillitis, one tonsil ending in quinsy and suppurating.

These cases present a fair type of three of the forms in which the disease has shewn itself as an epidemic in my district during the latter half of the year 1858, up to this date (May 1859). Up to this time, I have had under my care upwards of eighty well marked cases; excluding many others, to which I shall presently allude, of a less distinctly marked character. These cases have occurred at all ages, extending from two weeks to fifty-five years; not beyond that age, except in one case. They have occurred in all ranks of life, but in a very much larger proportion amongst the middle and upper ranks than amongst the poor.

The exemption of the pauper class is remarkable. I have medical charge of a large district, and also of the union house. Out of three hundred and fifty recorded cases of illness in the out door poor, only eighteen were diphtheria; in the union house there were only two cases.

The cases have been quite unconnected with scarlet fever; of that I speak confidently.

Some cases of erysipelas have occurred during the epidemic of diphtheria; many of urticaria; an unusual number of eczema; several severe and unusual cases of pompholyx, or pemphigus; many of pleuropneumonia, of an asthenic type; very many of neuralgia, of an intermittent type; and more cases of ague than I have seen in the district before at any time during a period of thirty years.

The furunculoid epidemic, with whitlows, thecal abscess, and necrosed bone, which had gone on during the three years previously to the advent of diphtheria, almost entirely disappeared when the latter epidemic commenced.

I have already described three forms in which the disease presents itself, viz., simple ash-coloured diphtheria membrane in patches, with very slight congestion of the surrounding parts, and without fœtor. Secondly, a deeper colour, and more widely spread membranous exudation, with fetid breath, and intense engorgement of dark hue. Thirdly, the membrane with much tonsillitis, in a few cases resulting in quinsy. But there has been a fourth and more formidable state of things to contend with, namely, an extension of the membrane in either of the above forms, to the larynx and trachea, the symptoms of which I need not describe. In the three cases of 1857, and in the earlier of this epidemic, there was no appearance of ulceration. If the membrane was peeled off, the part under presented a clean patch of smooth surface, distinguishable from the surrounding parts, but in no degree abraded. But lately, there has been more tonsillitis, and frequently superficial ulceration, in several cases in the last few weeks, excavating more deeply into the tonsil; the membrane being still distinctly marked. During this period, east winds have prevailed, and more feverish constitutional disturbances have been observed.

With reference to the more general symptoms, the prominent feature is depression of the vital powers. The pulse is not always quick, but when so, is that of an irritable circulation. More frequently the pulse is slow, waving, and very compressible; the skin readily cools down (as when a hand is exposed out of bed), is moist and soft, almost clammy to the feel. Where fever has been observed, it is of a remittent or intermittent type.

Some cases have been ushered in with slight diarrhœa, with discharge of blood. The nose, and sometimes the passage of the ears, become involved; and, in the former case, epistaxis has occurred, not readily arrested. In some cases, blebs of serum have arisen, especially on the fingers; and, in some cases, urticaria has come on as convalescence approached. Debility remains in a marked degree, even in milder cases, after the local symptoms have disappeared, and I know that fatal cases of syncope have occurred, even when convalescence