exposed, and what remains must be divided carefully on a director, otherwise your knife might slip further than you intended, and, to your great horror, enter the popliteal artery and vein. If your first incision were well carried back on to the condyles, their articulating surfaces are now completely exposed for the use of the saw. This saw should be Butcher's; I mean Butcher of Dublin, not a butcher's saw, as the theatre porter seems to think, from the instrument he has given me. This saw of Mr. Butcher's is one of the most perfect tools I ever worked with. The safest plan is to commence from behind, and to carry it forward over the rounded extremity of the femur till you reach the edge of its articulating surface in front. In this way, and by the assistance of this saw, you remove only a thin slice, including all the diseased articulating cartilages, but without shortening the bone to an inconvenient extent. In like manner remove a slice from the head of the tibia, though of course here your cut will be simply flat, at right angles to the shaft of the bone. This part of the operation is very greatly facilitated by your assistant forcibly flexing the leg, and pushing the head of the tibia well upwards and forwards. The patella must next engage your attention. The articulating surface, whether diseased or not, must be removed by the saw, unless you decide to remove the whole bone, which latter proceeding is strongly recommended by some operators of great experience. Hitherto I have left it, but in my next operation I shall remove it. I have not had any proof that it retards the healing process, but I am told by those who have operated more frequently than I have that it does so, and that it does not add to the strength of the limb. Having completed your saw cuts, examine the cut surfaces, and observe carefully whether you have removed all the diseased bone, and whether you have opened a sequestral or carious cavity. In the former case, I need hardly say, you must remove the sequestrum; and in the latter, you may use the gouge, to scoop out any carious bone that the saw has left behind. I have advised your only removing a *thin* slice from both femur and tibia to prevent shortening of the limb. This is the rule; the exception occurs when, from long-continued contraction of the flexors, you have a difficulty in straightening the limb, in which case you must again have recourse to the saw, as the bones should not be pressed *forcibly* against each other. I have seen no inconvenience from slight pressure.

The operation seldom gives rise to much hæmorrhage. One or two arteries are all that usually require ligature. But all that bleed freely must be secured, as secondary hæmorrhage has, in more cases than one, been apparently the indirect cause of a fatal result. Four or five sutures are usually required. Roll the thigh to the splint with a firm linen roller as far as the knee; leave this uncovered; roll the leg in like manner below, and the foot to the foot-piece. Use no side splints.

All this must be done before your patient is removed from the operating table; and, if done without dawdling—I do not mean with indecent haste—it will be concluded almost before your patient has recovered from the chloroform.

There is no point which has struck me more forcibly in these operations than the great relief from pain which, after a few hours' smarting, they afford to the patient. I usually give a dose of opium about three hours after its completion, and frequently no more is required. Mr. Humphry, of Cambridge, objects to the use of opiates after operations in general. My own experience in a London hospital is decidedly in favour of their use.

I think that all of you who have watched my last two cases must have been struck with the vast improvement in the countenances of the two little fellows since their diseased joints have been cut out. There is no longer that anxious and distressing expression which was always present previously. Their faces are now bright and cheerful, the colour is returning to their cheeks, and, instead of treating me to tears, they always welcome me with a smile.

In conclusion, let me recommend you, gentlemen, to give this important subject your most careful consideration. Watch for yourselves all the cases that occur in this hospital. Take the opportunity of seeing all you can in other hospitals; for I am sure that you will invariably, in the present day, meet with the courtesy which I hope you all show to strangers when they visit us. Do not be guided in your selection of this operation by the *ipse dixit* of any man, but take all the evidence, all the practical evidence, which is offered *pro* and *con*. by those who have had the most experience.

APPOINTMENT.—J. Sharman, Esq., F.R.C.S., has been appointed surgeon to the Finsbury Dispensary.

ON THE

PREVALENCE OF CONTINUED FEVERS IN THE METROPOLIS AND OTHER PARTS OF THE UNITED KINGDOM DURING THE YEAR 1858.

By CHARLES MURCHISON, M.D., M.R.C.P.,

ASSISTANT-PHYSICIAN TO KING'S COLLEGE HOSPITAL, AND TO THE LONDON FEVER HOSPITAL.

THE sparing prevalence of continued fevers throughout the metropolis during the year 1858 was a matter of general observation; and it was not uncommon to hear the coincidence of this diminution in the prevalence of fever with the frightful condition of the Thames during the month of June, adduced as an argument that continued fevers of all sorts are independent of putrid emanations, and, indeed, that their specific poisons cannot be generated by any defect in sanitary arrangements. Without stopping to consider whether the emanations from the river, *if this had remained sufficiently long* in the condition in which it was about the middle of June, might or might not have been capable of generating fever, I shall content myself by showing that there was no abatement of that species of continued fever which alone depends for its origin upon putrid emanations. The great diminution in the prevalence of fever generally was owing to the almost complete disappearance of those forms, which are now known to be quite independent of the causes just alluded to.

In an essay upon the Etiology of Fever, published in the forty-first volume of the "Medico-Chirurgical Transactions," I accepted the division of continued fevers into four species—typhus, relapsing fever, typhoid fever, and simple fever or febricula; and I endeavoured to show that each of these is dependent on different causes. Many cases are set down as "febricula" which are merely mild examples of some of the other forms. True febricula does not originate from any specific poison, but from such causes as exposure to the sun, fatigue, &c. Typhus and relapsing fever, again, are essentially epidemic diseases. Both are eminently contagious, but both may take their origin *de novo*; relapsing fever being always associated with famine, typhus being apparently the result of destitution and over-crowding combined. But whatever be their origin, their grand characteristic is, that they prevail as great epidemics, and then almost entirely disappear. This is especially the case with relapsing fever. On the other hand, the so-called typhoid fever, or, as I have proposed to designate it, the better to distinguish it from typhus, "pythogenic fever," (Vide *Edinburgh Medical Journal*, Oct., 1858,) is an endemic disease, the poison of which is generated in the emanations from putrefying animal (generally faecal) matter. Its numbers in many places vary but slightly from year to year. No doubt these may, under certain circumstances, increase, or the endemic disease may become epidemic. This is particularly observed in places of limited extent, where in general the disease is not very prevalent; but in London and elsewhere, where its causes are in constant operation, the number of cases does not vary greatly in different years.

These positions I have substantiated by the statistics of the London Fever Hospital, at which, for eleven years, the distinctions between the different fevers have been recorded. The returns of this hospital are certainly not a fair test of the amount of fever in the metropolis, but may be considered as furnishing a just criterion of the nature of the fevers which are most prevalent. The following table gives the number of admissions of each fever during ten years:—

YEARS.	EPIDEMIC.		ENDEMIC.
	Typhus.	Relapsing.	Pythogenic.
1848	526	13	152
1849	155	29	138
1850	130	32	137
1851	63	256	234
1852	204	88	140
1853	408	16	211
1854	337	5	228
1855	342	1	217
1856	1062	0	149
1857	274	0	214

Thus there were of typhus, in 1848, 526 cases; in 1851, only 68; and in 1856, 1062. Again, of relapsing fever, there were in one year, 256 cases; and for the last three years, none. On the other hand, during the ten years, the largest number of cases of pythogenic fever was 234, the smallest 137; in other words, the variation from year to year was inconsiderable.

The returns for the year 1858 afford a remarkable confirmation of the views expressed in my essay, which was communicated to the Medico-Chirurgical Society in March of that year. Typhus, which, in 1856, numbered 1062 cases, in 1858 had dwindled down to 15; and, during the last seven months of the year, only one case was admitted with the characteristic eruption; while of the entire 15 cases, the eruption was absent in 6. This immunity from typhus still continues. During the first two months of this year (1859), one case only has been admitted. Of relapsing fever, not a single case has been seen since 1855. Of the cases of pythogenic fever, however, there has been no diminution. During the ten preceding years, the total number amounted to 1820, making an average for each year of 182. The number, in 1858, exactly tallied with this average, or was 180; and, during January and February of 1859, there have been admitted 19 cases.

The results obtained from the statistics of the London Fever Hospital are confirmed by referring to what has been observed in all the other metropolitan hospitals. There has been a diminution in the number of admissions for "continued fever" in those hospitals only—such as St. Bartholomew's and Guy's—which, from their situation, admit cases both of typhus and pythogenic fever. Typhus and relapsing fever I have shown to be almost entirely confined to the most over crowded localities, and but few cases find their way into those hospitals situated in the more open suburban districts. Thus, in the year 1856, in which there were admitted into the Fever Hospital 1062 cases of typhus (mostly from the central districts), and 149 cases of pythogenic fever, there were admitted into St. Mary's Hospital, from the suburban parish of Paddington in which it is situated, 14 cases of pythogenic fever, and 2 of typhus. As might have been expected, the diminution of admissions for fever in 1858, observed in other hospitals in London, did not take place in St. Mary's. Thus the average admissions for the three years 1854, 55, and 57, from Paddington and the adjoining parishes, were 28 cases of pythogenic fever, and 2 of typhus; and, in 1858, there were admitted 27 cases of pythogenic fever, and 2 of typhus; while one of the typhus patients appears to have come ill from Birmingham.

Throughout the provinces of England also, there has not been the same diminution in the prevalence of "fever" which has been observed in London. On the contrary, at certain places—such as Windsor—there have been outbreaks of great severity. But this is owing to the circumstance that the fever which at all times prevails in country districts is not that which in London for the time being has well nigh disappeared, but is almost solely pythogenic fever, and, consequently, is essentially an endemic disease. All the outbreaks alluded to have been of the most local and circumscribed character, and dependent upon causes of a local nature. Such I ascertained myself to be the case in the outbreak at Windsor.

Similar results are arrived at by studying the returns of the Scotch hospitals. All the great Scotch and Irish epidemics have consisted of typhus or relapsing fever. During the last few years there has been a most remarkable abatement in the prevalence of fever in the large towns of Scotland. In 1858, fewer cases of fever were admitted into the Royal Infirmarys of Glasgow and Edinburgh than in any year since 1823. But here, again, the diminution has, for the most part or only, been in typhus or relapsing fever. Thus there were admitted into the Glasgow Infirmary:—

In 1847, 2399 cases of typhus, 2333 relapsing fever, and 127 pythogenic,	
In 1852, 1293 " 192 134 "	
In 1859, 166 " 0 " 94 "	

So also in Edinburgh. Of 8331 cases of fever admitted into the Royal Infirmary in 1847 and 1848, almost all were typhus or relapsing fever. Twelve cases only of pythogenic fever were recorded by Dr. Waters, now of Chester, in his "Inaugural Thesis," as having been observed between the end of Nov., 1846, and the end of March, 1847. But, during the year 1858, there were admitted only 45 cases of typhus, no cases of relapsing fever, and 25 cases of pythogenic fever.

The conclusion is, that the causes of typhus are still more rife in Edinburgh and Glasgow than in London; while, on the other hand, pythogenic fever appears to be at all times more prevalent in England. In Paris and other parts of the continent of Europe, it is well known that pythogenic fever is a

more common disease than even in London; and hence it would appear that the causes which generate it become more potent the farther we proceed south. In connexion with this, it is important to observe, that pythogenic fever in London, and other places is always most prevalent after a long continuance of warm weather. In every one of the ten years, 1848–1857, by far the largest number of cases have been admitted into the London Fever Hospital at the end of autumn and beginning of winter. The same rule has held good in 1858, two-fifths of the 180 cases having been admitted in the three months, August, September, and October. In the same year, likewise, all the limited outbreaks of pythogenic fever throughout the provinces of England occurred towards the end of autumn. Thus of 34 fatal cases at Windsor, 21 died during the month of November alone. In Scotland the same law does not, at first sight, appear to have been followed in 1858. Thus, in the hospitals of both Edinburgh and Glasgow, the largest number of cases occurred in the first two months of 1858; but with regard to Edinburgh, at least, the large number observed in January and February was merely a continuation of an increased prevalence, which commenced in the previous autumn of 1857.

These remarks illustrate in a forcible manner the importance of distinguishing between the different forms of fever before drawing any conclusions as to their causes, or to the circumstances under which they occur. As long as a number of different diseases are confounded under the common designations of "continued fever," "fever," and "typhus," it will be impossible to arrive at any accurate generalizations as to their causes or mode of prevention.

Sackville-street, Piccadilly, March, 1859.

ON THE EMPLOYMENT OF IODIDE OF SODIUM.

By ALEXANDER URE, Esq., F.R.C.S.,

SURGEON TO ST. MARY'S HOSPITAL, AND LECTURER ON CLINICAL SURGERY.

I SUBMIT to the profession the following observations respecting a medicine, which will, I trust, be found useful in practice. Iodide of sodium is met with in the ashes of sea-weed, and of various plants which grow on the sea-shore. To this source may be reasonably ascribed the belief entertained in the healing virtues of sea-weed by inhabitants of the coast in different parts of the globe. Professor Laycock, in an ingenious address which he delivered at the pharmaceutical meeting in Edinburgh last November, and which is published in the "Pharmaceutical Journal" of the month following, states that "in the pampas of South America, where goitre is prevalent, the remedy, a so-called goitre-stick, is nothing more than the thick stem of a sea-weed." Mr. Cooper, in his "Surgical Dictionary," recommends for some scrofulous affections the use of poultices of sea-weed.

Iodide of sodium, as a therapeutic agent, is and ought to be more active than iodide of potassium, since it is richer in iodine. According to Gmelin, iodide of sodium contains 84.45 parts of iodine in the hundred, while iodide of potassium contains but 74.27, the proportion of sodium, though small, being still sufficient to cover the irritative quality of its associate.

As far as my experience goes, iodide of sodium is a milder salt, more assimilable, and better borne by the stomach, than iodide of potassium. It is, moreover, much less prone to produce symptoms of iodic disturbance. Patients under my care have taken it steadily for weeks together, without suffering the slightest inconvenience, and with uniform advantage as regarded the morbid condition. On no occasion, save one, has there been any complaint made of this medicine producing sense of weight or uneasiness referred to the stomach, nausea, impaired appetite and digestion, headache, running from the eyes and nostrils, general nervous depression—symptoms which at times supervene during the administration of iodide of potassium, even in moderate doses. The instance in question was that of a puny, scrofulous boy with disease in both knee-joints.

As a general rule, the preparations of soda are milder in their operation on the system than those of potash. If, moreover, the important view, first announced by M. Dumas in the 92nd volume of the "Annales de Chimie," be accepted, that there are certain salts which leave the blood the faculty of becoming arterialized, while others deprive it of this property, and that the salts having soda for their base are more proper to maintain