But, as I have referred, however slightly, to my own unfavourable experience, let me also say that I have met with and had the pleasure of knowing some men who are the proprietors of asylums, who are as honourable and truthful and just as any men in existence; who forget their profits, and, as physicians, treat their patients with unflinching humanity and generosity and skill; whose doors are freely open for patients to leave with the earliest indication that change will be to the patients' advantage; whose asylums are somewhat like lunatic clubs, in which the residence of patients is to a great extent voluntary; whose excellent practice, were it general, would go far to redeem a bad system; and whose active usefulness must survive any reasonable and beneficent change in the lunacy law. Of the present position of such men or of such a man in such a system, one can only say, "Que diable allait-il faire dans cette galère?"

But what to do?

In the first place, I may broadly state my opinion that no change of the law can be satisfactory which does not contemplate the eventual abolition of all private lunatic asylums. The deprivation of the personal liberty of any of the Queen's subjects is an affair of the State, and must only be undertaken by the State. From that axiom there must be no flinching. Such asylums as I have last described may survive, under some other name, as voluntary retreats for persons of defective or damaged mind. For lunatics who must be confined against their will, asylums ought to be provided by the State, and managed by boards of governors. Moreover, the care and treatment of quiet and harmless cases of insanity by the open medical profession in domestic life, as single, or double, or treble cases, ought to be encouraged by the law and its administrators, and not discouraged, as it is at present. It may be very convenient to Commissioners that the insane should be gathered together in large herds or groups; but it is not to the advantage of anyone else except the custodians; and the Commissioners must eventually conform to the requirements of the age, and prepare to inspect the treatment of the insane wherever it is most convenient for the insane to be treated. And the idea of making everything smooth and easy for official visitation, which reached its climax in a proposal that for the convenience of the Commissioners every asylum should be close to a railway-station, must be replaced by wider views of official duty.

The discussion of the large question of certification may well be postponed to another opportunity; only I may observe that I think that no tinkering of the present certificate-system will suffice to make it safe to the practitioner or satisfactory to the public. The medical man ought to be put firmly upon his right footing as the exponent of scientific opinion; and the action taken upon evidence of that opinion in so grave a matter as that of depriving a man of his liberty ought to be no less than that of the civil power, whatever may be determined for the best as to the judge, or the court, or to the form of inquiry.

Moreover, great changes are needful in the administrators of the lunacy laws. The Commissioners in Lunacy are administrators in the metropolitan district, and inspectors only in the remainder of England and Wales; and it is very certain that the worst asylums to be found in the country are under their immediate jurisdiction. If their Board is to survive a thorough reform of the lunacy laws, they ought at least to resign the control of the metropolitan asylums, and to install the justices of the peace of the counties of Middlesex, Surrey, Kent, and Essex in the same authority which the justices of the peace possess in all other counties, the Commissioners themselves exercising everywhere a uniform power of inspection, report, and superintendence. But a more extensive change is still more needful and important, which would render needless this local and partial change. There are socially and logically but two classes of lunatics in the community, those who are destitute and those who are not; and there ought, accordingly, to be only two authorities to administer the lunacy laws, and two laws for them to administer, as they severally regard these two distinct classes of the insane. The present division of authority between the Lord Chancellor's Officers in Lunacy, the Commissioners in Lunacy, the Local Government Board and the Boards of Guardians, the Visiting Justices and Visitors of Asylums, the Boards of Clevedon and Caterham, etc., is intricate, confused, and mischievous. Instead of this, the Local Government Board, or the Minister of Health when he is appointed, ought to be placed in authority over all subordinate authorities having control over the care and maintenance of all destitute lunatics; and the Lord Chancellor's Officers in Lunacy, or, to speak with more technical accuracy, the Lord Chancellor with all his subordinate officers in lunacy, under the Royal Prerogative, ought to have authority over all other lunatics and persons charged with their care and control. This change would leave no sphere of action for the present Board of Commissioners in Lunacy, the members of which might well be distributed between the two new and enlarged authorities, half of them going to the Local Government Board, and half of them to the Lord Chancellor. Upon this broad

basis, the details of lunacy law reform could be built up with symmetry, science, and effect; but, without some broad basis of this kind, founded upon a logical principle, any reform of the lunacy laws which we may expect will be but some tinkering of the old pot where the light of day most inconveniently shines through its rust-eaten sides. Be assured, however, that the longer reform is delayed the more comprehensive it will be when it does come; for the history of social politics is the opposite of that of the Sibylline leaves, and generally the longer you wait for it the larger it becomes. In the meanwhile, be it our duty, both collectively and individually, to strive that this most pitiable and helpless class of diseased persons, from whom the profits of private lunatic asylums are derived, shall not suffer longer than we can help under the disadvantages of this worn-out old law. Sequestered as they have been from our professional care, they are still, as diseased persons, the proper objects of our interest and regard; and we owe it to them, not less than to ourselves and to our profession, to strive that the law which governs their care and treatment shall be conceived and executed in the spirit of benevolence, of the scientific knowledge of disease, and of the true relations which the ethics of our profession teach as being consistent with the true dignity and welfare of both medical practitioner and patient.

ON ERYSIPELAS OF EPIDEMIC TYPE.*

By SIR WM. R. E. SMART, M.D., K.C.B.

THE observations I am about to offer are derived from occurrences within the experience of our naval hospital establishments, especially that in this port. Premising that erysipelas in all its forms would seem to have risen into importance, so far as it concerns the navy, within the present century, previously to which it appears rarely in the records of that service, I proceed to offer my remarks for your consideration.

It is found in the records of Haslar Hospital that, during twenty years, from 1856 to 1875 inclusive, there were only two quarterly periods—June 1867 and September 1869—without admissions for erysipelas, which proves that the specific causations of that disease are ever present, awaiting only the action of secondary agencies for their development.

The number of cases treated during that period was 519, giving a yearly average of twenty-six, with minima of twelve, seventeen, and eighteen in 1869, 1870, and 1871 respectively, and a maximum of sixty-one in 1874; the nearest approach to which was forty-one, in 1856. Thus 1874, with its unusual frequency, is singled out as an epidemic year, the preceding and succeeding years, 1873 and 1875, having each only twenty admissions.

Erysipelas is a disease of debility in its surroundings as well as in itself. Its chosen *habitats* are in low courts and alleys, in crowded hospital wards, where it becomes endemic and sometimes epidemic. As regards individuals, it attacks the needy and careworn, or the over-anxious, in preference to those in better circumstances and condition; but the otherwise strong and healthy, as in the instances of sailors and soldiers, are not exempt, as shown in these records. Whether in 1874 they suffered disproportionately to the general population of Portsmouth, there are no data to guide an opinion.

There is scarcely any disease in which the signs of superinduced adynamia are more marked; and, moreover, the comparative results of opposite principles of treatment afford a physiological test of the inherent depression characteristic of erysipelas and all its congeners. It is quite safe to say that, under the old system of treatment by depletory measures, the milder forms were converted into the more severe, and deaths were much more frequent than they have become now, under the contrary principles of treatment. Whether it be idiopathic, traumatic, or puerperal, it is, in all cases alike, a disease of well pronounced debility; and it may be not far wrong to conclude that, with never absent sporules, the causation of epidemic intensity may be in the casual prevalence of some one or other of the depressing physical conditions, perhaps, atmospheric and meteorological, that in some indefinable way lower the general tone of health in a community. That there are states under which the disease becomes infectious through aerial media, the past experience of its outbreaks in hospital wards proves; and that it may be contagious, as in the exanthemata, without the presence of inflammatory exudations, admits of scarcely a doubt, as occurs where a man and wife sleeping in one bed are attacked in succession, and where it has been seen to creep from bed to bed

* Read before the annual meeting of the Southern Branch.

along one side of a ward; and it is certain that these properties are intensified on all occasions of its epidemicity.

There is ground for suspicion of its inoculability in the fact that, with slight wounds and merely abraded surfaces, there is increased liability to it where the epidemic type is in force. Whether it is transmissible by "fomites" has not, I think, been substantiated either way. In these general features, and, in its precursory stage, in its tendency to metastasise to serous surfaces, and to pyæmic complications, the disease bears analogies to the exanthemata proper, with which it may very likely have a true alliance; and this idea derives force from the frequency of its epidemic occurrence at the same periods with epidemic exanthems, especially with scarlet fever and measles, as in 1874, and in another remarkable instance to which I shall refer hereafter. In our latest authorised *Nomenclature of Diseases*, we find this deduction approached, but not arrived at, though sufficiently so to indicate the conception of a correlation of the entire group, which was never intimated in older classifications.

In that *Nomenclature*, by the College of Physicians, the disease is defined under three heads: 1. Simple cutaneous (or erythematous); 2. Phlegmonous (or cellulocutaneous); 3. Diffuse inflammation of cellular tissue tending to spread indefinitely. Whenever the disease is epidemic, with irritation or inflammation of the lymphatic vessels and glands, these three forms are found to coexist. Of the first form, which is the ordinary sporadic type of the disease, I shall only notice that it is the metastatic, in which the serous surfaces of the brain, lungs, and peritoneum, and even of the testicles, are apt to become involved: of the second, that it is rare without previous breach of surface, although, otherwise, it comes from the extension: by contiguity of the subjacent tissue with a highly inflamed integument of the third, that it is only an extension of the second by continuity of structure throughout the system. Thus we have suppurative action pervading the entire sheath of a limb, or under the scalp, or around the kidneys, or in the mediastinum, or consecutive superficial abscesses. When the lymphatics that are imbedded in the inflamed areolar tissue partake in the surrounding action, or when they absorb the products of the areolar inflammation, and convey these into the general current of the circulation, septicæmic or pyæmic complications are evolved, and visceral abscesses are produced in the liver, the lungs, or the muscular structure of the heart itself, as I have seen in erysipelas of the face from phlegmon of the lip, or abscesses in an upper extremity after phlegmonous erysipelas of the opposite lower extremity, and *vice versa*. Consecutive abscesses are the sequelæ of phlegmonous erysipelas, whether circumscribed or diffuse; but the visceral forms are, I believe, much more frequently the result of the latter.

As to the pyæmic complications, it must be remembered that they are not peculiar to the erysipeloid forms of disease, that they may arise, and prove very pernicious in their results, from a mere suppurating scratch or abrasion, or from a simple pustule externally, and that they sometimes originate in internal lesions, as the intestinal ulcerations of enteric fever, or other suppurations.

In the *Nomenclature*, hospital gangrene is placed in juxtaposition to erysipelas, but their characteristics differ; and although I have dealt with several cases of the former, there were no coexistent cases of the latter. There is, however, another form of disease seen in the hospitals of camps and ships, to which the term "hospital gangrene" is sometimes applied wrongly. It attacks stumps and lacerated wounds, and its ravages are limited to the areolar and aponeurotic tissues that are discharged in clotted or thready sloughs, leaving the muscular and vascular tissues untouched. This is, in reality, a traumatic erysipelas of the third group, or "diffuse inflammation of cellular tissue" extended to the subjacent fascial structures of a low organisation, and to the periosteum.

The epidemic in question commenced in the middle of November 1873, and it had lost its typical character early in December 1874. During that period, there were 64 cases, of which 58, or 906.5 per 1,000, were discharged; 2, or 31.3 per 1,000, died. In comparing these with the entire results through twenty years, 519 cases with 471 recoveries, or 907.5 per 1,000; 30 invalided, or 57.80 per 1,000; and 18 deaths, or 34.68 per 1,000, there is found to be evidence in the higher mortality of the greater intensity of the disease when epidemic than when of the simply sporadic type; the results of treatment being at the same time shown to be in favour of the epidemic period by the ratios of those rendered "unserviceable", which were 30.7 in the epidemic against 63.3 per 1,000 for the whole twenty years.

If we glance at the epidemic constitution of the exanthematic fevers in this district, there is found to have been a great revitalisation of small-pox from 1871 to 1873, in the spring of which year it disappeared as an epidemic. Its place in the category was at once filled by measles

and scarlatina, both of which prevailed more or less through the succeeding three years, 1874, 1875, and 1876, the latter being in great force in the last of these years; and mumps was also epidemic in 1874 and 1875. In the middle of this period of exanthematic excitement, 1873-74, erysipelas became epidemic, dying out in 1875, or rather relapsing into its sporadic form, which it has since retained.

With reference to localities the cases came from, and the order of occurrence in these, they were, roughly speaking, the shore and the ships, the latter holding free intercourse with the former, and the first of the series being from the dockyard, on November 11th; the second from the *Duke of Wellington*, on November 17th; the third from the *Excellent*, on November 27th; and the fourth from the hospital wards, on December 15th; while the Marine Barracks at Forton sent its first case on January 7th, and those at Eastney, none until May 5th. And as to frequency in the several localities, there are found to be, in hospital, seven; from Forton, seven; Eastney, six; dockyard, four; victualling yard, 1; and from ships, *Duke of Wellington*, *Excellent*, *St. Vincent*, six each; *Zealous*, five; *Asia*, four; these being in port constantly, or for long periods; while twelve ships casually there sent only one from each; these data tending to show the district character of the epidemic visitation.

As to the seasons of the year, the September quarter presented fewest admissions; and in the winter half, from October to March inclusive, there were more entries and more deaths than in the summer half from April to September.

As regards the question of age liability, it was remarkable that the training-ship for boys sent many cases; since advanced, or at least adult, age is generally found to be more liable than that of adolescence: in all there were ten cases under seventeen years, or 26.5 per cent. of the total cases. Another interesting fact was noticed, that results became more favourable subsequently to shifting the cases from the long-used erysipelas-ward on the ground floor, facing to the north-east, into one on the second floor with a sunny southerly aspect, showing the value of the simple vital stimuli, sunlight and fresh air, in treating the disease.

Although the hospital contributed seven cases, yet the injury-wards where the carbolic acid treatment was universally employed, remained exempt from erysipelas. On this point, one of the clinical officers remarked, in his report for the year 1874, "as usual, several severe compound fractures have done well, and attest to the favourable condition of the surgical wards, as otherwise the limbs would inevitably have been sacrificed". Of the cases, two had been in direct attendance on the erysipelas-wards; two were from medical wards in a distant block of buildings; one was from a ward on the second floor over the erysipelas-ward, with an intervening unaffected injury-ward between them—the case being an ulcer of the leg in which the disease showed itself on the head; and there were two of the servants who had held no intercourse with the cases. The fatal cases were: 1. A pensioner, under treatment for phthisis; 2. An officer from a ship, who had Bright's disease; 3. A seaman, under treatment for constitutional syphilitic ulcers; 4. A boy, who had, on admission, pyæmia, with a suppurating injury of a toe, and at the same time a slight erysipelatoous areola around an ulcerated vaccine vesicle. Neither of these cases proved to be in the smallest degree amenable to treatment, and the second, third, and fourth presented meningeal complication. In all of them alike there was a sickly or broken state of constitution, on which the additional depression told with fatal effect. On the other hand, where the patients had been in previous good health, they recovered notwithstanding the course of the disease being of severe cellulocutaneous type. The treatment employed was of the stimulating form, by frequent administration of beef-tea, milk, and eggs, with generous wine or brandy mixture in ample quantities, therapeutic trust being placed in half-drachm doses of the tincture of iron three or four times a-day. The local means applied were warm fomentations and stupes with free incisions of tense integuments and early evacuations of suppurations, on the plan first advised by Copland Hutchinson, at the Deal Hospital, in the first decade of this century.

I will refer now to a very remarkable local epidemic of the severest type occurring in a naval establishment, and almost and literally limited to it. In 1824, there was a very terrific epidemic of the cellulocutaneous or phlegmonous form of erysipelas among the workmen of Devonport Dockyard, in which, out of fifteen cases, twelve were fatal. They were all traumatic, and generally of slight injuries, many of which did not prevent the men from working several days after receiving them, up to the time of the setting in of inflammatory action in the wound with severe rigors. The injuries were all received between the end of July and the beginning of October, the weather being very hot and apparently dry. All were dressed at the dockyard surgery, and dwelt at their homes. There was no erysipelas in the towns and district around; but in the

following January there were two cases of similar nature among the town population at a considerable distance from the dockyard. The Naval Hospital had no cases of erysipelas in its wards, nor from outside, and the only epidemic disease of the year was measles. The course of the disorder was alarming, and its results were terrible, so that the dockyard men fancied they had the Egyptian plague among them; but not a case of infection occurred in the families of the sick. The origin of the epidemic has been always a puzzle, and its spread may possibly have been through agencies within the dockyard surgery, where the previous treatment and dressings had been given. Its mortality may have been assignable to the treatment, which was at first by repeated venesections, and calomel and antimony with saline purgatives; for, as soon as that was changed for early and free incisions with stimulants, the results changed, and the epidemic shortly came to an end. A more remarkable epidemic than this has rarely been described, and by itself it stands worthy of separate full consideration as a local epidemic confined to the worst conceivable form of cutaneo-cellulitis, with septicæmia or pyæmia developed in most of its cases, and with gangrene in several of them.

It seems to me to be impossible to arrive at any other conclusion than that the results of treatment have been altered in a marvellous degree since the adoption of free incisions before suppuration has commenced, and wherever abscesses shall have formed; and since the complete revolution in medical treatment from the older practice of copious venesections, repeated so long as the blood showed buffiness, or until it could be no longer borne, by cathartics and other depressing agents, to the more modern line, by the assiduous use of strong nutrients and the free use of vinous and alcoholic stimulants, accompanying free incisions.

The summary of these observations is as follows.

Erysipelas of epidemic type is more severe and more fatal than when of simple sporadic type; and that it may then be aggravated into a series of cases, of uniform "cutaneo-cellular" form, without milder erythematic cases, as happened at Devonport Dockyard in 1824, when a series of slight injuries were attended by fatal results; and such conditions may be of a very circumscribed local character.

When epidemic, it has increase of infectiousness.

Within a narrow area, where there are many idiopathic cases under treatment, it does not necessarily become traumatic, under due precautions.

When epidemic, it attacks younger ages than it is accustomed to do when simply sporadic.

It is more amenable to treatment in well aired sunlit apartments than in the reverse.

Its treatment on the stimulant plan is by far more successful in its results, than by the opposite plan of bloodletting and other depressing agencies.

And lastly, the epidemic type possesses some occult correlation with the epidemic exanthems, more particularly scarlet fever and measles. This proposition, as I believe, would be more strongly sustained by a wider investigation into the more general diffusion of all these diseases that occurred successively throughout the whole of the southern provinces of England, as shown in the navy and army returns for the period, the particulars of which the limit of time allowed forbids my entering on on this occasion.

TWO CASES OF SUCCESSFUL OPERATION FOR EXTROPHY OF THE BLADDER BY A NEW METHOD.

By J. GREIG SMITH, M.A., M.B., C.M.,

Surgeon to the Bristol Royal Infirmary.

My first patient, a weakly boy of eight years, was sent from Wales to the Bristol Royal Infirmary with a view to operation. The condition was a moderately severe one of combined extrophy of the bladder and epispadias, and differed in no important particulars from ordinary specimens of this deformity. The testes had just escaped from the abdominal cavity, and could be felt under the skin at the level of Poupart's ligament. The hernial tumour bulged considerably when the patient was in the erect posture, but was only slightly elevated above the surrounding skin when he lay on his back. The mucous membrane was red and irritable, bleeding freely on the slightest touch, and secreted considerable quantities of mucus and pus, which clung tenaciously to the surrounding parts. There was some soreness of the skin over which the urine dribbled. The malformed penis was smaller even than usual.

Preparatory treatment was adopted for a fortnight before operation. The patient was kept lying on his back in hopes that, by removing the weight of the abdominal contents, the tumour might diminish in size.

The mucous membrane was covered with oiled silk coated with dextrine, over which was kept a double layer of boracic lint. The atmospheric air and other sources of irritation were thus excluded, and the deposition of phosphates, by prevention of evaporation, was much diminished. Bland and demulcent drinks were freely administered. Under this treatment, the surface of the entrovverted mucous membrane soon became less red and angry-looking; and latterly, over its upper half, as low down as the orifice of the ureters, it became covered with true epidermis almost as white as that of the surrounding skin. The mucopurulent discharges diminished considerably in amount, and the excoriations on the contiguous skin entirely disappeared.

Under conditions more promising than on admission, he was operated upon under chloroform on April 25th, 1879. A flap, in shape like the wooden portion of a fire-bellows, its base being next the top of the tumour, was marked out on the abdominal wall. This, turned over, was intended to cover both the extrovverted mucous membrane and the upper surface of the penis. In area, it was considerably larger than the surfaces to be covered. Before dissecting this flap from the abdominal wall, its epidermic edge was bevelled off with a sharp razor. Then two groin flaps were raised. The outer edge of each was nearly semicircular; the inner edge above corresponded with the lower half of the abdominal flap, below it skirted the margin of the abdominal opening. The lowest portions of the lateral flaps were dissected from the sides of the penis, as far forwards as the rudimentary prepuce, and involved a piece of the scrotum as well. At the level of the glans penis two small incisions were carried partly round each side of the organ. Finally, the pendulous prepuce was perforated, with the view of drawing it over the glans penis and penile portion of the abdominal flap. Throughout the dissection, I was exceedingly careful not to lay hold of the flaps with my fingers nor to compress them with sponges. Tenacula and tenaculum-forceps took the place of fingers, and warm boracic lotion was used with the sponges. The flaps were then adjusted. Three silver wire sutures with needles at both ends were inserted at each lateral margin of the skin surrounding the tumour, and carried through the over-turned abdominal flap. These sutures were afterwards made to traverse the groin-flaps, and twisted over two gum-elastic bougies. In this way, not only was the abdominal flap kept adherent to the pared margin of skin abutting on the tumour, but the groin-flaps were firmly secured over both. The scraping with a razor of the epidermis at the edge of the abdominal flap was intended to facilitate adhesion with the denuded parts surrounding the tumour. The bougies over which the silver sutures were fixed were placed longitudinally along each side of the abdominal opening, so as to compress the flaps in the direction of, and not across, their blood-supply. Before completing the above part of the operation, I had stitched, with fine catgut sutures, the edges of the abdominal flap to the ring of skin left around the opening in the abdominal wall, and the portion intended to cover the penis to the mucous membrane on the upper surface of that organ. Then the loose skin got from the sides of the penis and the scrotum was stretched over the underlying penile flap, and brought together in the centre with alternating sutures of silver wire and horsehair. The groin-flaps were brought together with three harelip pins, meeting over the middle of the abdominal flap, and overlapping it for some distance all round. Last of all, the hood of prepuce was raised over the glans penis, surrounding it like a collar; and was stitched both to the penile end of the abdominal flap and to the extremities of the pieces of skin which were raised from the sides of the penis. The denuded portions were covered over as much as possible by drawing the integument together with harelip pins, a semilunar area about one-third of an inch in breadth being left uncovered at the top. The new bladder was washed out with warm boracic acid lotion, and a piece of India-rubber tubing was left to carry off the urine. The wounds were dressed with boracic ointment spread on thin gauze. The patient was placed in a sitting posture in bed, his knees being bent on the abdomen, and secured in that position by means of a bandage carried round his neck.

The subsequent history of the case is uneventful. With the exception of a portion of the preputial collar, which sloughed, every part of the transplanted skin survived and healed without the appearance of a drop of pus. In the uncovered portion, the granulations were built up without suppuration—a frequent enough occurrence under the application of boracic acid. In three days, all the pins were removed; and in seven days, all the sutures. A month after operation, every part was covered with epithelium. On the second day, some urine oozed from below the flaps on the right side; this oozing ceased in a few hours; and, with this exception, all the urine flowed through the tube.

The result may be described as a complete cure of the extrophy and a partial cure of the epispadias. The opening in the penis is large enough to admit a No. 5 catheter. As yet, there is no power of retention. No urine may flow for a quarter of an hour or so, if the patient