

## THE LANCET.

LONDON: SATURDAY, AUGUST 30, 1845.

WE shall commence our analysis of the various documents connected with the sanatory state of the population of Great Britain that have appeared within the last few years, by describing the supplementary report "On the Interment in Towns." This report was undertaken and published by Mr. CHADWICK, at the request of Sir JAMES GRAHAM, and contains a great mass of interesting information. There is no hygienic question respecting which we are so much behind our continental neighbours as that of the burial of the dead. No attempt whatever has hitherto been made by the legislature to enforce a proper disposal of the remains of the deceased, and the result is a state of things, in our large cities, and especially in the metropolis, most injurious to the living, and most repugnant to all feelings of delicacy and propriety. At the beginning of the present year, there seemed to be some possibility of a legislative enactment being passed with reference to burials in towns, Mr. MACKINNON having brought a Bill into the House of Commons to that effect. Public feeling, however, is not yet sufficiently roused to the importance of carrying a Bill of this nature through the House, in hostility to those interests which any change would injure, and Mr. MACKINNON, after much opposition, found himself obliged to withdraw the Bill. As, however, he has given notice that he will again bring it forward on the 8th of April, 1846, we may yet hope to see some efficient measure adopted by the legislature.

Mr. CHADWICK's report is a comprehensive one: not only does it treat of the results to public health of the present system of burial, but also of nearly every other social question connected with the interment of the dead, so that considerable light is thrown on various interesting and important points. We shall follow the report through each of its principal divisions, analyzing the principal facts and arguments.

The first question examined is the most important of all, as on it may be said to rest the expediency or in expediency of modifying the present system of burial. It is, whether or not the decay of animal matter, and more especially of human remains, is calculated to injure the health of the living. Most of the arguments and facts which have been brought forward by various authorities, at different periods, to prove or disprove the injurious effects produced on health by exposure to emanations from animal remains in a state of decomposition, are quoted and examined. The innocuousness of decomposed animal matter has been maintained by some few medical men of eminence, but they constitute a very insignificant minority. The immense majority of the profession has, in all ages, professed a contrary doctrine, and considered the emanations from putrefying animal remains as extremely injurious to the health of living beings, and as calculated either to give rise to serious disorders, or to weaken their vitality in such a manner as to render them an easy prey to

disease. Nearly the only argument, of any apparent weight, brought forward by those who deny the pernicious influence of such emanations, is the fact of dissecting being carried on, generally speaking, without any injurious effect on health. The assertion, however, is incorrect. It is only when the ventilation of the locality in which dissection is carried on is very good, and when great care is taken gradually to remove all detritus, that the health of the anatomist does not visibly suffer, and that in the course of a very short time. Even in the best managed dissecting-rooms there are few persons who can remain employed for many months without finding their general health impaired. In badly ventilated rooms, on the contrary, in which the dissection of bodies in an advanced stage of decomposition is allowed, and proper precautions are not taken, diarrhoea and low fever are extremely common.

In addition to the various instances given, illustrative of the above facts, we may mention the experience of the Paris dissecting-schools, in which dissection is resorted to perhaps on a larger scale than in any other city. Dissecting is carried on, in Paris, in two different localities, at Clamart, and at the Ecole Pratique. The former is a large building erected in the outskirts of the city, on the ground formerly occupied by a cemetery. It consists of four vast rooms, forming a quadrangle, with a garden in the centre. Each room is calculated to afford accommodation to a hundred students; indeed, a few years ago, they were often made to contain even more than that number. Here, it is true, that diarrhoea and the other ailments occasioned by dissection are nearly unknown; but the rooms are high, dry, boarded, and well ventilated by numerous windows, which are kept open during the night. No student is allowed to dissect a subject in a state of even partial decomposition. An inspector examines the tables every afternoon, when the students have left, and sends away all the parts in which an advanced state of decomposition has manifested itself. At the Ecole Pratique the same precautions are adopted, but the rooms are crowded, close, paved with stone, and damp. The result is, that few students can dissect for more than a few weeks without being attacked with diarrhoea, and many are obliged to give up dissecting entirely.

The fact of butchers enjoying good health is also occasionally brought forward as a proof of animal emanations not being injurious. The argument does not, however, bear scrutiny. Butchers are obliged to be excessively careful with reference to decayed meat, which they seldom, if ever, retain in slaughter-houses; great attention is also paid to clear the premises of all offal calculated to contaminate the atmosphere. In slaughter-houses where such precautions are not observed, it is a well-ascertained fact, that the health of those who are exposed to putrid emanations invariably suffers.

PARENT DUCHATELET, the celebrated French writer on hygiene, is the one whose opinions are the oftenest quoted by the persons who look upon animal decomposition as innocuous. In various parts of his work he has combated the generally-received opinions on this subject, as well as on others, and has attempted to prove that the danger of ex-

posure to such emanations is much exaggerated. It is, however, now generally admitted, that the theoretical deductions of PARENT DUCHATELET are not to be received with the same confidence as the facts which he announces. He was often carried away by a kind of optimism, peculiar to his character, which led him scarcely to appreciate rightly the data he had himself collected, and to exaggerate the innocuity of the various professions which he examined. That such is really the case, subsequent researches in the same fields has proved to demonstration, as was stated during the late discussion on the influence of tobacco on health, at the Academy of Medicine at Paris. Nor must we forget that PARENT DUCHATELET admitted the fact of the pernicious effect of putrid emanations, merely asserting that there was exaggeration in the generally received opinions on the subject.

The facts, on the other hand, which substantiate the pernicious effect on animal life of putrid exhalations, are too numerous and too well authenticated to admit of doubt; from the pestilences which, according to history, have so often followed the decomposition of corpses after battles attended with great loss of life, to the numerous solitary instances of disease attributable to a like cause, which are profusely scattered in the works of medical writers. Thus, confining illustration to modern times, what occurred at Ciudad Rodrigo may be mentioned, where, according to Sir J. MACGREGOR, twenty thousand bodies were put into the ground within the space of two or three months. This circumstance appeared to influence greatly the health of the troops, as, for some months afterwards, all persons exposed to the emanations from the soil, as well as those who were obliged to drink the waters from the sunk wells, were affected by malignant and low fevers and dysentery, or by fevers frequently putting on a dysenteric character.

The history of the "Cimetière des Innocens," at Paris, offers one of the best examples that can be found of the effects of interments in towns. In this instance, the results were so manifest, from the great extent of the evil, that they could neither be denied nor extenuated. The burial-ground was in the centre of the town, surrounded by narrow streets, and, although not of a very large size, was every year made to receive an immense number of corpses. In the course of time it had been raised considerably above the level of the adjoining neighbourhood. The plague was remarked on two occasions to remain longest in the vicinity of the burial-ground, which was also visited by low typhoid fevers, in a much greater degree than other parts of the city. Meat soon became putrid in the neighbourhood, and the air of the cellars in the adjoining streets was at times so loaded with carbonic acid as to extinguish candles. It was at last found necessary to disinter the bodies, which was done in the winters of 1785-86, and not during the warm season, as stated by PARENT DUCHATELET. The bones were deposited in the catacombs of Paris, where they are still to be seen, and the cemetery was converted into a public market.

Numerous well authenticated individual instances are quoted in the report of gravediggers, sextons, and under-

takers, whose health has been seriously disordered, or who have even lost their lives, from sudden exposure to emanations from newly-opened graves, or vaults, or from bodies in a state of decomposition. No writer, however, has so closely investigated this part of the question, as Mr. WALKER, the author of the able work entitled "Grave Yards of London." The instances which have occurred under his own observation since he has devoted his energies to the investigation of this subject, are such as alone to carry conviction with them.

We thus see, that when the question is narrowly scrutinized, the opinions of medical writers respecting the deleterious influence of putrid emanations on life are fully confirmed. Indeed, how can it be otherwise, when we consider, on the one hand, that the smallest portion of putrid animal matter introduced into the circulation acts as a direct poison, often destroying life in an incredibly short time; and, on the other, that the immense surface of the lungs is continually absorbing and introducing into the economy the volatilized products of decomposition which may be floating in the atmosphere. This being the case, the interment of the immense number of persons who die yearly in London, in the interior of the metropolis, must add to its insalubrity, even although no immediate effects produced by the dissemination of putrid exhalations in the atmosphere are perceptible. As stated in the report, "in spaces of ground which do not exceed two hundred or three hundred acres, closely surrounded by the abodes of the living, layer upon layer, are every year imperfectly interred a number of dead bodies, amounting to fifty thousand, equivalent to an army of twenty thousand adults and thirty thousand children. Within the period of the existence of the present generation, upwards of a million of dead must have been interred in these same spaces."

In appreciating the influence of a cause of insalubrity, it must be remembered that it is, generally speaking, only in extreme cases that its action can be clearly perceived by ordinary methods of examination. It is not by inquiring into the individual state of health of the inhabitants of a locality that we can judge correctly of its salubrity or non-salubrity, unless the cause of insalubrity be so powerful in its operation as to produce absolute illness in the greater part of the population. A man may die at eighty, for instance, who would have lived to ninety had not he been subjected to some cause or other of insalubrity. In reality, his life has been curtailed ten years, and yet he might be brought forward as a proof of the non-operation of the cause of disease to which he at last fell a victim. It may, indeed, be mentioned, in connexion with this remark, as a singular fact, that as the salubrity of a locality increases, and along with it the average duration of life, the number of centenarians appears to decrease. Thus, in London, a century ago, out of 141,720 deaths within the bills of mortality, during the five years ended 1742, the deaths of fifty-eight persons, of a hundred years and upwards, are recorded; whilst, out of 139,876 deaths which occurred in the metropolis, as returned by the registrar-general, during the three years which ended June 30th, 1841, only twenty-two deaths of a hundred years of age and upwards are recorded. The average age of death of all who

died was then twenty-four years; it is now, judging from an enumeration made from the returns of 1839, about twenty-seven years, and there appears to have been a considerable improvement in all periods of life up to ninety years.

The only means of arriving at a correct estimate of the salubrity of a district, is to ascertain the average duration of life, taking care to operate on a large number of lives. If by this process a locality is found to give a low average, as has been the case with all our large towns, we are warranted in attributing the increased mortality to all the real causes of disease which are discovered to be in operation, although we may find it difficult, or even impossible, to ascertain the precise share of each cause in the general insalubrity. Once, therefore, the pernicious influence of decomposing animal matter on life is admitted, we cannot but also admit, that the decomposition of some two thousand two hundred tons of human flesh that is annually deposited in the two hundred acres of the London burial-grounds must contribute considerably to the unhealthiness of the metropolis.

Not only are the emanations from grave-yards disseminated in the atmosphere of surrounding districts, but the products of decomposition percolate the soil, so as to pollute it to an immense distance. In some parts of Germany, the opening of wells has been prohibited within three hundred feet of grave-yards. In France it has been found necessary, after due inquiry, to forbid the opening of wells within five hundred yards of cemeteries. Whenever, in the construction of drains or sewers in the metropolis, the workmen arrive near to a cemetery, its vicinity becomes painfully evident, a nauseous effluvia manifesting itself, which renders it often difficult for them to continue their labours. It would appear, that the drainage from cemeteries will even find its way through cemented walls, into the neighbouring sewers, if they are situated on a lower level, a convincing proof of the extent to which putrid infiltration takes place underground, in the vicinity of these heaps of corruption. The fact of the burial-grounds being covered with grave-stones, tends to increase this subterranean percolation of the products of decomposition.

From what has been stated above, we feel justified in adopting, *in toto*, the conclusion of the report—viz.,

“That inasmuch as there appear to be no cases in which the emanations from human remains, in an advanced stage of decomposition, are not of a deleterious nature, so there is no case in which the liability to danger should be incurred, either by interment or by entombment in vaults, amidst the dwellings of the living;—that it may be established as a general conclusion, in respect to the physical circumstances of interment, from which no adequate grounds of exception have been established,—that all interments in towns where bodies decompose, contribute to the mass of atmospheric impurity, which is injurious to the public health.”

#### THE BIRMINGHAM HOSPITAL.

WITH much satisfaction we find, by a report in the *Birmingham Pilot* of August 15th, that the respectable inhabitants of Birmingham declined to submit to the system which has recently been pursued in the election of medical officers to their General Hospital. A public meeting was held last week at the Town Hall,—R. HASLUCK, Esq. in the chair,—at which five thousand indi-

viduals assembled, many of them ladies, when Mr. GUTTERIDGE, the surgeon, commenced the proceedings, by thanking those present for the hearty manner in which they had responded to his call, and requesting from them a calm and impartial examination of the charges which he intended to bring under their consideration. Mr. Gutteridge proceeded to show that the General Hospital was a public charity, that the welfare of the hospital involved, to a certain degree, the individual interests of its supporters, whether direct or indirect, and that in requiring the guardians of the charity to inquire into and correct the abuses developed in a statement which Mr. G. has already laid before the world, they were taking the only course for the preservation of the charity, the very existence of which depends on the just and upright administration of its several duties.

We applaud the manly spirit with which Mr. G. repelled the false insinuations and gratuitous insolences directed against himself; but such is nearly always the penalty of attempts to correct the misdeeds of those who abuse the public confidence. It now only remains for the governors to carry into effect the desire which many of them entertain for the welfare of the institution under their management, by putting in force the following proposition, which is moderate in its language, and determined in its purpose:—

“That this meeting is convinced that a necessity exists for inquiry into sundry grave charges that have been preferred, of mismanagement of the General Hospital, especially in relation to the election of medical officers; and this meeting, deeply anxious for the continued prosperity of that valuable charity, do earnestly request the governors to institute a thorough investigation of the same.”

The motion was carried by an almost unanimous show of hands, there being but *three* dissentients.

Mr. GUTTERIDGE again rose, and said, “The all but absolute unanimity with which the resolution has been passed, encourages me to believe that the next step will receive the same hearty approval; it is that of appointing persons for carrying into effect the resolutions of this meeting. I have chosen such persons as are not only friends to the hospital, but to the town at large, and through whom we may expect that impartial justice will be done.” Mr. Gutteridge then proposed that the following gentlemen be requested to act as a committee, with power to add to their number, for the purpose of carrying into effect the resolutions of the meeting:—The Mayor of Birmingham, the High Bailiff of Birmingham, George F. Muntz, Esq., M.P., Robert Scott, Esq., M.P., Colonel Thorn, Rev. H. Clarke, Rev. G. O. Fenwick, Rev. Mr. Fletcher, and other gentlemen, to make a committee of sixty.

Having passed a vote of thanks to the chairman, for his fairness and impartiality in the business of the evening, and Mr. HASLUCK having briefly returned thanks, the meeting was dissolved.

Thus it will be seen that this movement is no longer at the mercy of jobbers and intriguers, but is fairly before the public of Birmingham, and, judging from the character of the parties whose names are included in the second resolution, it may reasonably be expected that the future good management of the institution is on the eve of being secured.

## HOSPITAL REPORTS.

### ST. GEORGE'S HOSPITAL.

REPORT OF CASES OCCURRING IN THE PRACTICE OF MR. HENRY JAMES JOHNSON, SENIOR ASSISTANT-SURGEON.

ON THE DISTINCTIVE SYMPTOMS OF DISEASE OF THE HIP-JOINT, AND SOME AFFECTIONS INVOLVING THE PSOAS-ILIAC MUSCLE.

IN our last report of Mr. Henry James Johnson's cases, we were unable to conclude the notice of those affections of the bursa to which he had drawn, at various times, the attention of the pupils. We purposed doing so on this occasion, but have received from Mr. Johnson some remarks, which, originating in a case of disease of the bursa, beneath the tendon of the *psaos-iliac*, have extended so far as to constitute a report of themselves. As they contain the narration of two private cases of Mr. Johnson's, we subjoin his own statement of them. But, previously to giving it, we would observe, that, in our account of bursal and other tumours about the ham, we omitted to include fatty tumour of that region. Within the last week, there has been, at the hospital, a case which appears to be of that description. The case itself is not unattended with obscurity, and we may possibly report it hereafter; but, as small fatty tumours do unquestionably grow in the cellular and adipose tissue of the ham, we have added them to the list of those swellings, whose occurrence should be borne