

## PART IV.

### MEDICAL MISCELLANY.

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*Reports, Transactions, and Scientific Intelligence.*

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#### ACADEMY OF MEDICINE IN IRELAND.

President—ROBERT M'DONNELL, M.D., F.R.S.

General Secretary—W. THOMSON, M.D.

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#### SUB-SECTION OF STATE MEDICINE.

Chairman—A. H. JACOB, M.D., F.R.C.S.I.

Secretary—H. C. TWEEDY, M.D. Univ. Dubl., M.K.Q.C.P.

*Wednesday, April 21, 1886.*

DR. A. H. JACOB in the Chair.

#### *Sanitary and Judicial Aspects of Cremation.*

DR. H. C. TWEEDY read a paper on the sanitary and judicial aspects of cremation. [This communication will be found in full in the May number of the Journal, Vol. LXXXI., page 430.] Having alluded to the condition of graveyards which gave rise to the Southwood Smith Commission in 1849, he then proceeded to show that the dangers arising from the present mode of sepulture were to be traced partly to the contamination of air and water by the gases of decomposition and other putrefactive matters, and partly by the fact that the germs of several forms of zymotic disease not only retain their vitality in graves, but are capable of indefinite propagation under favouring conditions of heat and moisture, and, becoming liberated on the disturbance of graves, give rise to the several diseases of which each is the specific ferment.

The process of cremation gets rid of all these dangers, anticipating putrescence by the rapid reduction of the body to its elements, and by the total destruction of all organic germs by the high temperature necessary for the process.

A description was then given of the Gorini Crematory now in use at Woking, under the auspices of the Cremation Society of England.

Allusion was next made to certain medico-legal objections which might be raised in opposition to the practice of cremation.

The first of these is the possibility of cremation during a trance. The second, the danger that cremation may destroy traces of violence or poisoning, and thus defeat the ends of justice.

The first objection is easily disposed of. Let us hear Sir Henry Thompson, President of the Cremation Society, speak on the subject. He says:—"There is a source of very painful dread, as I have reason to know, little talked of, it is true, but keenly felt by many persons at one time or another, the horror of which to some is inexpressible. It is the dread of premature burial; the fear lest some deep trance should be mistaken for death, and that the awakening should take place too late. Happily, such occurrences must be exceedingly rare, especially in this country, where the interval between death and burial is considerable; the fear is almost a groundless one. Still, the conviction that such a fate is possible, which cannot be altogether denied, will always be a source of severe trial to some. With cremation no such catastrophe could ever occur, and the completeness of a properly conducted process would render death instantaneous and painless if by any unhappy chance an individual so circumstanced were submitted to it. But the guarantee against this danger would be doubled, since inspection of the entire body must precede the act of cremation, no such inspection being possible under the present system."

Several answers may be given to the present objection.

1st. A medical examination of the body previous to cremation would in the case of a large number of poisons—the minerals and mineral acids, at least—raise a strong suspicion that death had been compassed by foul means. Death from injury or from concealed wounds would in like manner be discovered.

2nd. As far as mineral poisons are concerned, direct experiments, instituted by M. Cadet, and repeated by MM. Dourvault and Wurst, have proved that the salts of arsenic and all other metallic poisons except mercury, which is completely volatilised, can be detected in the ashes after cremation.

3rd. In cases in which there was the least doubt as to the cause of death it would be possible to remove the stomach and a portion of the viscera, and to preserve them for future examination should the necessity for such examination arise.

A recent decision of Mr. Justice Stephen declares that the cremation of a dead body, if effected without nuisance to others, is a legal proceeding; but further protection to the public is requisite, to meet which it has been proposed—

(a). "That places used as crematoria should be licensed, and that it should be a crime to dispose of a body by burning in any place not so licensed.

(β). "That it should be unlawful to cremate any body without a

special official permit, to be issued only on receipt of a medical certificate (founded either on personal attendance during life or on a *post-mortem* examination) that death undoubtedly resulted from natural causes, that the cause was so-and-so, and that there was no reason whatever to believe that death was caused or accelerated by foul play."

Were some enactment constructed on similar lines to become law, with the addition, perhaps, of a clause recommending (as suggested by Sir Henry Thompson in 1873) the appointment in every district of a properly-qualified medical inspector, with duties corresponding to the French "*Médecin-Vérificateur des décès*"—an official without whose written permission no burial can take place in Paris—one cannot but feel that we might then honestly, and without further hesitation, cast in our lot with the advocates of cremation, certain that in doing so we were outraging no law, human or divine, animated with the confidence that we were benefiting our fellow-man by removing one most prolific source of disease and death, and at the same time fully satisfied that we were not opposing the course of nature, but merely anticipating by a little, and for the good of our kind, the time she herself takes in carrying out her own eternal and immutable law of "Dust to dust, and ashes to ashes."

THE REGISTRAR-GENERAL FOR IRELAND (DR. GRIMSHAW) said the question of cremation was one of great and growing importance. Its sanitary aspect admitted of no discussion, and its sentimental aspect scarcely concerned the medical profession; but its medico-legal aspect required careful consideration in the interests of the public, having regard to the risk of cremation being made use of as a readier method than others to get rid of suspicious cases. Thus, besides cases of poisoning and violence, there were cases of maltreatment, mismanagement, and starvation to death likely to escape by cremation, while there were no safeguards suggested that were not already adopted in interment. A cremation certificate added no security whatever; for the medical man gave a certificate of the ostensible cause of death to the best of his belief, and yet the patient might have died of something else indicating murder. Then the body could be exhumed from interment, but a body burnt could not be recovered, and nothing could be said in favour of cremation in that respect. It was said the French system of holding an inquest in every case might be introduced; but there was no likelihood of such a system being adopted in the present state of public opinion. The chances of discovering murder where the body was cremated were, therefore, a little less than where the body was buried. On the other hand, the fact of the body remaining some time in the grave confused materially the evidence of the cause of death. For instance, in one case a body having been exhumed was found to contain a considerable quantity of arsenic; but it was also found that all the bodies in the same burial-ground were full of

arsenic. Hence it happened sometimes that certain products of decomposition led to the suspicion that alkaloids or some obscure forms of poison had been made use of in destroying the life of the individual. After all, the only safeguard was the adoption of the French system—namely, that of inspecting the body and inquiring into the cause of death in every case.

DR. ATTHILL had long been in favour of cremation, and regretted that the good old system of ancient times was not still carried out. The son of a clergyman in a remote country parish, in his early days he attended every funeral, and he felt the greatest disgust at the sight of the half-rotted bone, with the hair still attached to the skulls. As soon as he became aware of the custom of the ancients, he regretted that cremation had ceased to exist, and for the last ten or fifteen years he advocated cremation on sanitary grounds. It was revolting to follow mentally the process of decomposition in the bodies of loved ones, whereas upon cremation the remains could be deposited in an appropriate urn, and kept, if necessary, in personal custody.

DR. HENRY KENNEDY said the question of expense was worthy of consideration in connection with the subject, as the cremation of paupers would be a considerable tax on the country. He did not believe in the great danger to health alleged to arise from interment, Darwin's work on Earthworms demonstrating that there was a constant change going on as a law of nature—food passing through the bodies of animals and turning into manure, to be reproduced as food again. Besides, there was no evidence that graveyards were a source of sickness, and therefore it might fairly be questioned that the mischief alleged to arise from such contamination was exaggerated.

THE REGISTRAR-GENERAL (DR. GRIMSHAW) said paupers could be cremated in batches as they were interred at present.

DR. JOHN WILLIAM MOORE regarded the argument from sentiment as altogether in favour of cremation. In the Bible—so far as he knew—there was nothing from beginning to end opposed to cremation. Dr. Henry Kennedy had not given sanitary or preventive medicine sufficient credit, nor could he agree with him as to the comparative innocuousness of the round of nature which he had described. Within recent years outbreaks of disease had occurred from disturbing graveyards, notably in London, where also a recrudescence of the great plague had occurred year after year from this same cause. Surely Dr. Kennedy did not mean to assert that people were recklessly to drink water contaminated with typhoid fever? The expense of cremation would be much less than that of burial.

DR. ATTHILL—The actual expense would be only a few shillings, the cost of the fuel.

THE CHAIRMAN (DR. JACOB) held with the Registrar-General that the

sanitary aspect of the question was not open to dispute. Indeed, any system by which the results of decomposition could be got rid of would be a boon. There was no doubt as to contamination being transmitted from interment. An authenticated case had been recently reported from France, where a diseased cow was buried, and the disease was transmitted to the vegetable aliment, and thence to the sheep that browsed upon it, and from the sheep to human beings. Diseases had been disseminated from the existing system of burial. Dr. Tweedy's paper had satisfied him that the medico-legal difficulties in the way of cremation had been thoroughly met. It was only in one of 20,000 cases that judicial considerations intervened, and a suspicion arose to justify exhumation, and therefore, as regards cremation, they had to deal but with that one case in which the law found it necessary to protect the public against foul play. The French system supplied the means of protection, and it might be supplemented by preserving the body in a cave or frigidarium for a week, or even a couple of months, if necessary, prior to cremation. It was obvious that £6 was a fancy price for cremation, and that when it was adopted on a large scale 6s. would be nearer the mark. Sentiment would be broken down only by educating the public.

DR. H. C. TWEEDY replied.—As to the sentimental point, he agreed with the Registrar-General that this was not the place to discuss it at all. The medico-legal point was the only one upon which real objection could be urged against cremation, and there was no doubt that the evidence of one class of injuries would be destroyed by cremation, which would remain with interment—namely, that of fractures. Thus, an injury to the skull would be discovered upon exhumation after many years, whereas if reduced to powder discovery was out of the question. But by the appointment of a public officer to hold a mitigated form of coroner's inquest in every case of death, the danger either of premature burial, or the burial of a body without discovering what the particular person died of, would be removed, provided the officer was a reliable man and had no interest in the matter. In addition to the ordinary certificates, there ought to be a third from a perfectly independent man. He had not discussed the question of expense, as not being within the domain of State Medicine, but he estimated the cost at a little over 5s., when cremation was adopted on a large scale; for instance, the Secretary of the Cremation Society had reduced 124 lbs. of flesh and bones, forming the hinder part of a horse, to 4 lbs. in an hour, at a cost of 5s. 8d.

*The Climate of Dublin.*

DR. J. W. MOORE read a paper on the Climate of Dublin, based on twenty years' meteorological observations. [It will be found at p. 18.]

DR. H. C. TWEEDY inquired the cause of the prevalence of fogs in the channel, and especially round Dublin Bay.

DR. ATTHILL noticed the remarkable difference in rainfall at Howth as compared with Dublin, only some eight miles distant. At times the weather was parchingly dry at Howth, whilst in Dublin the streets were well watered. When the wind was S.W. the atmosphere was saturated with moisture, and yet hardly any rain fell at Howth, unless there was a considerable raincloud. The rain fell on the mountains south of Dublin. It was different when the wind came from N.E. or due E.

DR. HENRY KENNEDY.—And there is also a difference between the rainfall in Dublin and Belfast, it being much greater in Belfast.

THE CHAIRMAN (DR. JACOB) concluded from Dr. John William Moore's observations that the rainfall was much better distributed in this country than elsewhere, and there were also less fluctuations of temperature. He had observed, as a yachtsman, the effect of winds upon the rainfall in Dublin Bay; it was a matter of common experience to see the rain falling the entire day on shore, whilst the bay was quite free from rain—an effect he attributed to the easterly winds, which were more prevalent at sea. When the wind drew into the E. he anticipated that it would bring down the fog, and he ran for the harbour. The contour of the land in the neighbourhood of Dublin caused a rapid precipitation of the water from the atmosphere, and the rainfall was equable, and led to the agreeable temperateness of the climate. However, there were sometimes remarkable variations of temperature in a single day, as seen by the tables.

DR. JOHN WILLIAM MOORE, in reply, said the prime factor in the formation of fogs was calm weather. No such thing was known as a fog with a gale, unless in cloudland, when the clouds were flying over the hills. Fogs were produced in different ways, according to the season. The spring fogs, which accompanied calm weather or light easterly winds, were due to the cold water condensing the vapour in the warmer air; while the summer and autumn fogs were caused in the opposite way—from the warm water with a chill atmosphere above it. The winter fogs in the city were principally smoke-fogs, miniature reproductions of the celebrated London fogs. In Rostrevor the rainfall was considerable, owing to the mountains to the N. and N.E. Newcastle was much drier, and so was Downpatrick; but in Belfast there was a rainfall of about 36 inches. There being considerable hills N. and N.W. of Belfast, heavy rains fell there with S. and S.E. winds. The summer showers in Dublin were planetary showers, due to the position of the city at the bottom of the valley of the Liffey—like the thunderstorms in London, due to its position in the bottom of the valley of the Thames. These summer showers did not reach Howth, because they died out immediately on passing from the land over the sea. Why? Because these showers depended on evaporation. The heavy rains at Howth were due to the upcast air at the north side of the hill. As the wind passed up from the hill it went to a great elevation, and met with a gradually decreasing temperature.