

Sanitation In War

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British Medical Journal.

SATURDAY, FEBRUARY 2ND, 1895.

SANITATION IN WAR.

COLONEL MAURICE, in an article in the *United Service Magazine* for February on the War between China and Japan, points out that in reference to the sanitary conditions of the mass of human beings now assembling round Peking, "a medical question of the greatest general interest needs to be answered. It is, within what time after the warm, moist weather sets in ought we to expect actual illness to follow upon the hopeless sanitary neglect of vast disorderly congregations of men, with many neglected animals, collected around that city?"

It appears that, in anticipation of an assault on Peking by the Japanese, the Chinese are collecting round that city half a million of men, who have next to no discipline or organisation, and hardly any knowledge of what these words mean; whilst everywhere they show by their filthy habits that they have not the faintest idea of the most ordinary military or sanitary precautions. He surmises that, so long as the dry cold weather lasts, no danger will ensue from the gathering of this host about Peking, but he pertinently asks what will happen when the snow, which has been fouled by hundreds of thousands of men and animals, melts in the spring? And he concludes that as soon as the warm moist weather sets in the consequence must be a frightful outbreak of pestilence of a malignant type.

The geographical position of Peking, situated in a sandy, alluvial plain, in 40° N. latitude, places it, as it were, on the boundary line of sub-tropical disease. The extremes of climate are great, 0° F. to 104° F.; the mean annual temperature is 52° F.; the mean winter range is 12° below freezing. The rainfall, which occurs chiefly in July and August, is less than 16 inches. These physical and climatic conditions so far warrant the anticipation that disease both of the tropical and temperate zone characters may be expected; and considering the ignorance of, and disbelief in, the efficacy of sanitary precautions, intensified by naturally filthy habits, impure drinking water, and squalor of living, the demoralisation of defeat, the crowding of vast numbers of men in insanitary dwellings, and the absence of discipline and moral control, it may well happen that diseases such as fevers, dysentery, diarrhoea, cholera may at any time rapidly assume a virulent and epidemic type, destructive to life and fatal to the prospect of successfully resisting the attack of the gifted nation which within so comparatively recent a

period of their history have adopted the ideas and practical methods of Western nations, and who day by day are proving how vain it is for ignorance and barbarism to resist them.

Colonel Maurice's question, then, is easily answered. All past experience teaches that when human beings are collected in masses and kept for any length of time under such noxious influences as he describes, the Nemesis of neglect of simple hygiene is quick to punish those who defy her laws and ignore her teaching, and very probably, could the actual state of matters be known, he would find that the penalty is already being exacted, though no doubt when heat and moisture are added, thawing the snow, saturating the ground, and fouling the water with the products of decomposing organic matter, and diffusing the germs of disease, ochletic and zymotic maladies will rapidly, within a few days or at most weeks, become more prevalent and destructive, and his vaticination will speedily be realised in the spread of fever, bowel complaints, and other diseases.

In his brief but graphic account of the present and prospective conditions of Peking and its environs, Colonel Maurice gives a description of conditions which will inevitably entail the direful results to which he looks forward, and it is a duty of all who speak with authority and experience on such questions to emphasise the warning and endorse the recommendation he has given to all who can do so without neglect of duty, to make their escape—the sooner the better—from the surely impending evil which in some form may break out at any time.

A recent issue of the *Daily Graphic* contains a striking sketch of the method adopted by the Japanese of disposing of the slain after a battle. The bodies of the dead are placed in light cases, and are cremated in a large fire kindled for the purpose. It would appear from this that the Japanese have acquired from their European instructors in military organisation and tactics wise sanitary ideas as to the best methods of disposing of their dead. It would probably be generally admitted by sanitarians that however religious belief or other motive may influence the disposal of the dead, during a pestilence or after a great action the safest method is by cremation if it can be properly carried out.

In 1871 the battlefields of the Franco-Prussian war brought this question into prominence. The French Government was then urged to apply cremation to bodies dead on battlefields, but it would not appear that this has been subsequently adopted to any extent in recent wars. Cremation, however, as a popular method of disposing of the dead, would seem to be gaining ground slowly. Gotha was the first European Government that authorised the practice. In most European countries it is, under certain restrictions, tolerated rather than encouraged, and whilst the conditions exist for burial under due sanitary precautions there is absolutely no necessity, from that point of view, for cremation, but for the slain after a great battle, in crowded populations and great cities, in any locality where pestilence may prevail, and where the number of dead may be much in excess of the earth's space that would be available for the disposal of disintegrating bodies, there cannot be a doubt that cremation, properly carried out, would be a most effective sanitary proceeding, and its adoption worthy of due consideration.

It is not surprising, viewing the advanced conditions of

the Japanese social and military systems of the present day, that they should have adopted this procedure, and, so far as we may judge, it seems to be done decently and with due respect to the dead.

Much might be said, no doubt, from the sentimental aspect of the question. But it must be remembered, however the process is brought about, that the body has to be resolved into its original elements, and obviously, if the number of dead be excessive, it is desirable that this process should be effected with the least danger to the living. Dr. Parkes pointed out that neither affection nor religion can be outraged by any method of disposal of the dead which is done with the proper solemnity and respect to the body—the earthly dwelling place of the departed. The question is one to be considered entirely from a sanitary point of view.

With respect to the common methods of disposing of the dead after battles—burying them in trenches, often but too shallow, so tainting the air, soil, and subsoil water—it is to be remembered that the results of this method might continue for years to be a source of disease. Whilst it is quite admitted that a body placed at a certain depth below the soil, in proper and suitable earth, is gradually disintegrated and resolved into its constituents, this is not the case where numbers are crowded together in insufficient space, in soil perhaps not suited to the purpose.

The only doubt with reference to the cremation of the dead on the battlefield would be whence the necessary amount of fuel would be forthcoming; but of course, given a sufficiency of that, so as to ensure complete cremation, no better sanitary method of disposing of the dead could be found.

Whatever sentiment may say upon the subject the result is the same ultimately, whether it take place in a few hours under the influence of heat, or whether it take place in a few years under the influence of natural processes—the resolution of the body into its constituent elements. We are, therefore, inclined to commend the proceedings of the Japanese, always assuming that the process is completely and thoroughly effected, and to express a conviction that other nations would do well to follow their example in times of war or pestilence, whatever may be their custom of disposing of the dead under ordinary conditions.

GENERAL PARALYSIS.

THE old proverb—It is the pace that kills—finds nowhere a more striking illustration than in this disease which, under the hurry, anxiety, and excitement of modern life, is becoming more and more common. For some unexplained reason the affection is more common in this country than in many others, and is, comparatively speaking, infrequent in Scotland. This has been explained by Northern patriots as another illustration of the harmlessness of whisky as compared with beer, a fallacious argument, for the onset of general paralysis may have been preceded by no excesses, and, given other factors, may occur in total abstainers. But while much with regard to the etiology remains obscure, one factor is almost always to be traced, namely, hard work under conditions of excitement and responsibility.

Among the educated classes it is men, and occasionally women, in the prime of life, whose careers are arrested

at the point when success is almost in their grasp. Among skilled artisans too, it is often the industrious earnest man who is singled out—the man who is always anxious about the quality of his work, and will work all night, if allowed, to finish his task. And there are many, though not so large a number as is usually imagined, in whom previous excess appears to have caused the onset of symptoms; but in many cases this conclusion is due to a confusion between cause and effect, since in most cases of general paralysis a certain amount of moral perversion is symptomatic of the early stage of the disease. The disease is practically confined to the first half of adult life, and those who have stood the strain until they are 50 need have little fear of being attacked by this terrible complaint.

The name of the disease gives little guidance to the symptoms met with, and many different clinical groups are classed under the same head. One feature, unhappily, is common to them all—the progressive character of the paralysis and the absence of any hope of recovery, medicine being powerless at present to do more than delay the inevitable result. In all forms, also, when the disease is once established, there is gradual steady failure of the physical and mental powers of the patient, until finally the paralysis becomes complete, and death closes the scene.

There is probably no disease of such gravity in which the onset is more insidious. On looking back, when the physical weakness, etc., have become marked, and the disease has declared itself, symptoms are remembered lasting for years past, which by themselves seem trivial, and are looked on as mere accentuation of personal peculiarities, but which, taken together, have the gravest significance. “Restless, unwonted activity, mental and physical, is of frequent occurrence; a feeling of superabundant energy, for which there appears no adequate relief; often undue irritability, which will not brook control or contradiction; an unreasonable demand upon the time and indulgence of others; waywardness, fickleness, or outbursts of furious passion upon trivial pretexts in those who had previously been more self-controlled and amiable; a growing change in the disposition and character, usually signalled by perversion of some one or more of the moral sentiments, a fact of primary import from the medico-legal point of view.” Such is the description of the symptoms found grouped in most early cases, given some years ago by one of the greatest living authorities.¹ The occurrence of some of these symptoms separately is common in healthy persons, but when several of them occur together, and persist, a close watch should be kept for any more definite signs. These usually occur from the physical side. There is no longer the power of executing finely co-ordinated movements, “the right hand has lost its cunning,” tremulousness of the facial muscles of expression becomes prominent, and a similar tremulousness affects the muscles of articulation, so that the speech can scarcely be distinguished from the thick slurring speech of intoxication, for which it is frequently mistaken. The subsequent course of the disease varies remarkably in different cases. In many there is mental excitement, with the development of delusions of grandeur, followed ultimately by dementia, and the description of this classical form is too well known to require further comment. But in a considerable number of cases met with in practice

¹ Bevan Lewis, *A Textbook of Mental Disease*.