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ANTAGONISM OF POISON AND DISEASE.

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All medical readers are familiar with the once popular treatment of acute Pneumonia by mammoth doses of tartar emetic. The French and Italian doctors seemed to be possessed with the idea, that too large portions of that medicine could not be administered. Their theory of *tolerance* satisfied them perfectly, and for a season their triumph seemed to be complete. I need hardly say, that in later times, we think we have found a more excellent method of cure. But, was the *tolerance* theory competent to meet the actual phenomena? Did it satisfactorily account for the results? I think not. It is true that the advocates of the practice taught that the emetic dose spent its force, *not as an emetic*, but as a *sedative* to the inflamed lung, and that of course the disease would be more speedily arrested if there was no emetic action at all.

It was after a close contemplation of this mammoth use of tartar emetic, that I was led to speak to my class in Transylvania University, so long ago as 1849, of what I then styled the *antagonism of poison and disease*, and still more recently, in Jefferson Medical College, the *antagonism of poison and poison*.

This doctrine, if I judge correctly, has direct application to the French and Italian treatment of *pneumonia*. Every thoughtful student is aware, that the doctrine has long been taught, that *morbid* or *poisonous* agency underlies almost every form of disease. In respect of many of our most common maladies, this view is popular almost everywhere. In attempting therefore a better solution of the curative operation of 100 grain doses of tartar emetic in the treatment of acute Pneumonia, I seemed quite feasible, to account for the favorable results on the simple principle of antagonism of the poison of the dose, and the poison of the disease. "When Greek meets Greek, then comes the day of war."

Who does not know, that 50 grains of tartar emetic swallowed at one dose, by a man in full health, would be very likely to prove fatal? But why fatal at all? Just because the dose meets no condition in the system that can create a basis for antagonism. A very grave morbid state would suffice, perhaps, to render harmless the over dose; or rather, if we not say, to be so completely *antagonised* by us to be actually annihilated.

Let us take another case. The time has been, in my short memory, when soap or potash in solution was held to be an unsafe antidote for the poisonous action of nitric acid in the stomach; and so other reason, than the formation of so much soap as to be, in itself, a poison. The mam-

moth doses of nitrate of potash, as remedies for acute rheumatism and active hemorrhage, promptly nullified all such speculations. I confess that when I first read of this practice in Villard's *Répertoire de Médecine*, some twenty-five years since, a shade of scepticism came over me, and I really doubted the truth of the statements. But the exhibition of 30, 40, 50 grain doses of nitre to the ultimate extent of 600 grains in 24 hours, has become so frequent an affair, as to silence the unbeliever entirely. We pause to analyse the treatment a little. What human being, in full health, could endure fifty or even thirty grain doses of nitrate of potash, every two hours? Let such an one make a trial, and he will soon find himself in a very undesirable condition. Gastric spasms and violent retching, with more or less of actual gastritis, will give abundant proof, that the man has actually been poisoned. But why is he not also poisoned, who takes the same doses and larger ones too, as a sure means of putting an end to profuse hemorrhage, or severely acute rheumatic pains? The response is to be found solely in the doctrine of *antagonism of poison and disease*. There is a morbid or poisonous agency present in the blood, and entire system it may be, fully competent to conflict successfully with the otherwise poisonous dose of saltpetre.

When we extend our vision yet further, we find happily, that this same doctrine aids, most efficiently, in accounting for our success in the treatment of the very worst cases of actual poisoning that we meet with. Look at the well-known power of alcoholic drinks to counteract the poisonous tendency of the worst wounds inflicted by venomous serpents. A merely accidental development grew into a settled fact in toxicology; so that the farmer, with no medical knowledge, can save his boy who has been the victim of such an accident, by the liberal use of whiskey or brandy, so as to intoxicate the individual completely. Force into the stomach of a boy of the same age, in perfect health, the same quantity of strong drink, and you would be pretty sure to kill him. In the other case the fluid poison fails to hurt (being the very reverse), just because it soon comes into conflict, somewhere in the economy, with that other poison (the serpent's), and the *antagonism* saves the patient. And we think we find yet further confirmation of our view of this subject in the established fact, that a man, habitually a drunkard, cannot be relieved at all from the effects of venomous bites by any quantity of liquor you might force into his stomach. The latter has lost all toxic power in his case, and therefore cannot antagonise.

Precisely on the same principle rest all the antidotes for our most deadly poisons. In a former paper I noticed the means for counteracting the operation of poisonous doses of strychnia, and need only add, that all the facts there stated are directly in point. In other words, they are apt