THE EARLY USE OF ANTIMONY IN SURGICAL CASES.

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THE only way of ascertaining the real value of any remedy is by watching its effects after being administered; in some cases, it may appear to act like a charm, whilst in others the result is just as disappointing. This, doubtless, is owing to idiosyncrasies of the patients in the majority of cases.

There are drugs, however, that have similar actions upon different persons, suffering from different diseases, whatever may be their constitutional peculiarities; of such, antimony is one; for, whether it be given to children or adults, male or female, suffering from pneumonia, rheumatic fever, or any inflammation, it has one constant effect in all cases, that of lowering the circulation.

In all inflammatory actions, the circulatory system plays a most prominent part; no inflammation can occur without changes first taking place in the blood-vessels, leading in the early stages to a dilatation of the vessels, and an acceleration of the blood-flow; this alteration in the circulation, constituting congestion, is the very first step towards all inflammatory action. If there be no congestion, there will be no inflammation.

Now we have in antimony a drug, the physiological action of which produces just the opposite condition to what we have in the early stages of inflammation, namely, a diminution in the quantity of the blood to the part, and a retardation of its flow. This action of antimony has led me to give it in several cases of injury to the chest and abdomen, especially in those of fractured ribs with wound of the lung, and fractures of the pelvis, where we cannot doubt the peritoneum must at the same time be injured.

I will first, and as concisely as possible, give notes of such cases treated with antimony, and reserve my further comments until the last.

CASE I.—A labourer, aged 30, fell from a scaffolding on to a heap of bricks, causing a depressed fracture of the fifth, sixth, and seventh ribs of the left side—a depression into which the fist could enter; the skin over the seat of injury bulging at each expiration, and receding with an inspiration. The skin of the whole of the chest, abdomen, and neck was emphysematous; the left side was super-resonant; and no breath-sounds could be heard. Severe hæmoptysis commenced two days after admission, and continued for six days. The side was strapped; milk-diet was given; forty minims of Battley's solution were given at bedtime, and fifteen minims of antimonial wine every four hours. He was discharged in five weeks, the depressed portions of the ribs having regained their position, and the patient feeling quite well.

CASE II.—A lad, aged 15, was caught between a hoist and the wall while attempting to enter the former when in motion, causing a fracture of the fourth, fifth, and six ribs of the left side, emphysema of the chest-walls, and hæmoptysis. The side was strapped; milk-diet was ordered; seven minims of antimonial wine and ten minims of tincture of opium were given every four hours. He was quite well after fourteen days, without any inflammatory symptoms.

CASE III.—A collier, aged 39, received a double fracture of the pelvis and a comminuted fracture of both thighs, by the falling of a stone in the pit. He was treated with Bryant's parallel splint for the fractured thighs, and a bandage round the pelvis; fomentations to the abdomen; milk-diet; and ten minims each of antimonial wine and tincture of opium every four hours. He was discharged in fourteen weeks.

In the first two cases, the hæmoptysis and the emphysema indicated that the lung was wounded. A lung wounded by the end of a fractured rib adds greatly to the seriousness of the accident; for, if the complication does not end the case soon, it certainly produces pneumonia in many cases, and so retards the convalescence of the patient. As students, we are taught in such cases to strap the side and watch carefully for the first symptoms of inflammation, so as to treat them accordingly.

My theory is that, by treating the patient, immediately upon seeing him, as if he were already suffering from inflammation, we prevent the actual attack, and recovery is hastened. Hence, in these two cases, I prescribed antimony in small and frequently repeated doses, so as to depress the circulation, thereby preventing the first stage, and so all the stages, of an acute inflammatory attack.

Similarly, in the case of the fractured pelvis, fomentations were applied to the abdomen; antimony and opium administered as if peritonitis were already present; and I thoroughly believe that, if the case had not been so treated, peritonitis would have undoubtedly set in, and the chances of his recovery would have been materially lessened;

for about this time I had had two cases of fractured pelvis; and only treated the peritonitis when it showed itself; and they were both fatal, post mortem examination revealing extensive peritonitis.

In these cases, too, I prescribed opium largely. It relieves the pain, prevents the patient being restless, and, in chest-injuries, by its action upon the respiratory centre, and, in pelvic injuries, by diminishing the peristaltic action of the intestines, brings the wounded parts into a state of relative, if not of absolute, rest, and so into a condition more favourable for repair.

In none of these cases were there any signs or symptoms of acute inflammatory action, the temperature never rising above 100°; and their termination in recovery was speedy.

The recovery of the fractured pelvis was delayed by the filling up of a large cavity over the sacrum, caused by the sloughing of the part. By the early treatment of these injuries with antimony and opium, many cases might be saved, or their recovery hastened.

THE MORTALITY FROM SMALL-POX IN ENGLAND AND WALES AND IN LONDON.

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THE following table of mortality from small-pox has been prepared for discussion at the International Medical Congress this year. The figures are derived from the three decennial reports of the Registrar-General (the last one, for 1871-80, is not yet published).

A table giving average annual number of deaths of persons from small-pox at certain ages to a million persons living at those ages (1) in England and Wales, and (2) in London during the three decennials 1851-60, 1861-70, and 1871-80.

Decennials.	(1.) England and Wales.			(2.) London.		
	1851-60	1861-70	1871-80	1851-60	1861-70	1871-80
All Ages.	222	163	235	276	302	439
Under 5 years.....	1034	654	526	1296	1158	1133
From 5 to 10 years.....	257	145	283	358	290	579
" 10 to 15 ".....	73	56	137	99	91	266
" 15 to 20 ".....	93	85	197	135	143	346
" 20 to 25 ".....	132	138	299	191	217	469
" 25 to 35 ".....	93	103	238	121	153	387
" 35 to 45 ".....	53	74	167	57	119	282
" 45 to 55 ".....	38	50	111	44	63	182
" 55 to 65 ".....	24	36	71	13	39	110
" 65 to 75 ".....	18	26	46	12	36	63
75 years and upwards.....	19	23	35	8	6	58

It is evident from these figures that the mortality of infants is uniformly diminishing decade after decade, while at other ages, especially in the third decade, it has increased. The ratio of increase at all ages to children under 5 years, is particularly striking. For England and Wales for the three decades, the ratios of mortality of those under 5 years to all ages are 4.6 to 1, 4 to 1, and 2.2 to 1; and for London, 4.2, 3.8, and 2.5. This diminution of ratios, decade after decade, proves the protective power of vaccination among infants, notwithstanding the increasing rates at all ages. But it is also evident that the rate of mortality for infants is higher than all the several ages, principally because a large number of them die before they are vaccinated during epidemic years. Having devoted considerable attention to the study of this subject, and having made personal observations in many places in the country and town, I can state that a large number are vaccinated before they are three months old, when the human blood has not attained sufficient stamina of life to undergo that constitutional change through vaccine-virus that could be looked upon as protective. Vaccination is a question of national importance; and, as we vaccinate the population to protect them from small-pox epidemics, it becomes our bounden duty to inquire how far the grounds on which an "Act to extend and make compulsory the practice of vaccination" is justified. While going into committee, after the second reading of the Bill, Lord Lyttleton stated that the object of the compulsory vaccination would be best accomplished by means of registration. The grounds on which he urged the Bill were, first, that the medical profession was unanimous in considering vaccination as a preventive of small-pox; secondly, looking to the last fifty years of the last century, and the first fifty years of the present century, the increasing diminution in mortality during the present century was due to the increasing practice of vaccination; thirdly, in those European