

kept from their work only the day of the transfusion. All showed the usual temporary effect of the bleeding, no agglutinins, no hemolysins.

The donee showed neither nephritis nor hemoglobinuria, no laking of blood, and no evidence that the new blood had in any way unfavorably affected the donee, nor that the donee had unfavorably affected the newly transfused blood. In other words, the conclusions reached in the laboratory were wholly realized in the clinic.

The occurrence of spontaneous cessation of hemorrhage in two of the cases—each of which was pathologic—suggests strongly this method of treatment for cholemic, hemophilic and other forms of pathologic hemorrhage.

Since the healthy blood of one individual is apparently physiologically interchangeable with that of another, if the blood lost by one is replaced by an equal quantity from another, the factor of hemorrhage may by direct transfusion be eliminated.

The transformation in these cases has been unequalled in my surgical experience, except in the relief from asphyxia by intubation.

TWO ATYPICAL CASES OF SMALLPOX.

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CASE 1.—History.—On April 1, 1905, I saw J. H. at the Indianapolis City Hospital, who had been sent there on the previous day with (alleged) typhoid fever. There was no history of syphilis and the patient had had the infectious diseases of childhood. He had been vaccinated six years ago. The patient had been a moderate drinker of alcoholic stimulants. His present sickness commenced with a general malaise and occasional chilly sensations. There was no pain, appetite was good, bowels were constipated, and there was some slight fever.

Examination.—I found the skin dry, face slightly flushed, and a few papules which, in their incipency, a few days previous to admission to the hospital, had been designated as the rose-colored spots of typhoid fever. There was a slight elevation of temperature. Tongue was heavily coated, abdomen slightly tender, and palpation of the chest gave negative results. This was true in percussion also, except a dulness over the left lobe. Heart was regular and sounds were clear. On the second day, which was the first day I saw him, there were a few fine papules on the face which some had suggested might be aene vulgaris, since the patient had had this disease since childhood. There was an occasional papule on the chest and abdomen, but no indication of induration, unless it was an isolated one on the chest, which possibly gave the appearance of an incipient umbilication.

Diagnosis.—Dr. J. M. Wallace, the interne, and myself, made a provisional diagnosis of smallpox, although the evidence was not strong. The patient was quarantined. On the second day the spots on the chest, face and abdomen were more numerous, but with little induration. The temperature was normal. On the fourth day vesicles were well formed on the face and an occasional pustule. On the fifth day the disease was well developed, but very mild indeed, and one in which mistaken diagnosis could easily have been made.

Patient was discharged from the smallpox hospital April 21.

CASE 2.—History.—J. R., colored, aged 60 years, was admitted to the Indianapolis City Hospital, March 30, 1905, with

ascites, pulmonary edema and dyspnea as a result of myocarditis and chronic nephritis. The legs were edematous. The patient responded promptly to treatment and gave every evidence of having recovered April 1, with the exception of an occasional attack of dyspnea when doing chores at the hospital. These, however, were infrequent, and did not interfere with his duties as assistant. April 3, together with all patients, he was vaccinated on account of appearance of Case 1 in the ward, but it was unsuccessful.

Course of Disease.—April 17 he complained of not feeling well, seemed to talk irrationally, and had a subnormal temperature. April 18 I found the patient had left his bed and was sitting in a chair at a remote portion of the ward, with signs of collapse, pulse imperceptible. Following the hypodermic injection of digitalin and strychnia, his condition slightly improved. On the following day there was no change. April 20 my attention was called to a roughness on his forehead, and on close examination the same condition was present on the back, chest and abdomen. On the following day, on some portions of the body there were papules, others felt like bird-shot, and several pustules were on the abdomen and chest. In two locations on the abdomen several of the pustules seemed to coalesce and form a large one. At no time did the patient's temperature reach normal. The different stages were present on the same person and at the same time.

Diagnosis.—Diagnosis of smallpox was made, and although there was some little doubt in the case he was removed to the contagious pavilion. Three days the development of the eruption was sufficiently pathognomonic to confirm the provisional diagnosis. The case was seen by Drs. C. E. Ferguson, A. W. Brayton, Paul Martin and J. M. Wallace.

Some of the irregularities of the case will be recognized as follows: Pre-eruptive stage imperfect, absence of the gradual appearance of eruption, various stages of eruption at the same time, resembling varicella somewhat, the eruptions in some localities possessing the characteristic histologic formation, while in others the vesicles were inclined to be unilocular rather than multilocular, and the variation of temperature in the one case and subnormal in the other. The unusual features in these cases, especially in the last one, will be easily recognized, and, therefore, comment is unnecessary.

FATAL POISONING BY THE EXTERNAL APPLICATION OF BICHLORID OF MERCURY.

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Patient.—I was called July 11, 1906, to see a young woman, aged 25, who had applied wood alcohol to her neck, back and left arm for rheumatism.

Examination.—She was hysterical, and said that the burning from the application was intolerable. The parts were very much reddened and inflamed, presenting the appearance of an ordinary scald or burn. I gave her a hypodermic injection of morphin and prescribed a local application of saturated solution of bicarbonate of soda. The next morning I was informed that the wood alcohol contained a large quantity of bichlorid of mercury.

Course of Treatment.—The patient passed an uncomfortable night. She complained of a burning sensation in her mouth, some vomiting, and a slight diarrhea. The back of the neck, the whole back down to the waist, and the left arm were thoroughly burned, and had become largely covered with blisters during the night. I treated the local injury as an ordinary burn, with a solution of bicarbonate of soda, punctured the edges of the blisters, preserved as much as possible the blistered skin for a dressing, and applied stearate of zinc. The burn improved nicely. She was nourished by white of egg and milk exclusively. The inflammation of the mouth, throat, stomach and bowels steadily increased and she died on the morning of July

17, a little over five and one-half days after the accident. At death the tongue was nearly double its normal size, and of a brownish color. It looked like cooked beef, and during the night before death the bowels were moving constantly.

Remarks.—The application used was what is commonly known as "dead-shot;" the wood alcohol and the bichlorid of mercury had been purchased separately, and the mercury had been added by the purchaser, hence the label on the bottle was simply wood alcohol, although it also had a skull and cross bones, and a "poison" label on it. The preparation was in a little medicine case in the toilet room and was supposed to have been locked up, but evidently was not. The young woman saw it, thought it would be good for her rheumatism, and had a friend apply it.

Some years ago I had a case of poisoning by arsenic, which presented almost the same symptoms. It was taken by the mouth by a very dissipated middle-aged woman, with suicidal intent. She survived the first shock, but died five or six days later from exhaustion caused by inflammation of the alimentary canal.

I know of no physiologic antidote for poisoning by corrosive sublimate. I relied wholly on giving the patient all the albumin she could take, hoping each day that the poison would become neutralized, and that the patient would recover. In that, however, I was doomed to disappointment. There was not the slightest indication that the poison was losing its power.

[EDITOR'S NOTE.—There are numerous cases¹ of poisoning from the external application of mercurial compounds. Generally the poison has been corrosive sublimate and has been applied in the form of ointment or as an alcoholic solution. Watery solutions, however, may be absorbed. Even black wash externally applied has produced salivation. The symptoms of mercurial poisoning after absorption through the skin are almost identical with those produced by the poison when swallowed. The irritation, inflammation and ulceration of the stomach and intestines are very prominent. There is good reason to believe that the stomach and intestines act as eliminating organs in these cases as in poisoning by other substances. No clear plan of treatment has been laid down by authors on toxicology for cases of poisoning by external application. The usual antidote for corrosive sublimate is albumin in some form which unites with the mercury to produce an insoluble albuminate. This albuminate, however, is soluble in an excess of albumin and hence the administration of albumin as an antidote should be followed by an emetic or by lavage of the stomach to get rid of the mercury which has been rendered insoluble before it can be re-absorbed in consequence of becoming soluble in an excess of the antidote. In case of absorption from an external surface, it is possible that the mercury escapes from the system in the gastric and intestinal mucus, in which case probably the use of albumin would be superfluous, if not contraindicated. Whether or not another antidote might be used is uncertain; it would seem as if a trial of some sulphid might be desirable. In regard to the external wound, probably nothing better could have been one than was done by Dr. Craig, as the bicarbonate of sodium tends to produce an insoluble basic carbonate of mercury which would not so readily penetrate the skin. But it is probable that in this case the poison had been absorbed before any application was made. Aside from the attempt to produce an insoluble compound of mercury in the intestinal canal, there is no special treat-

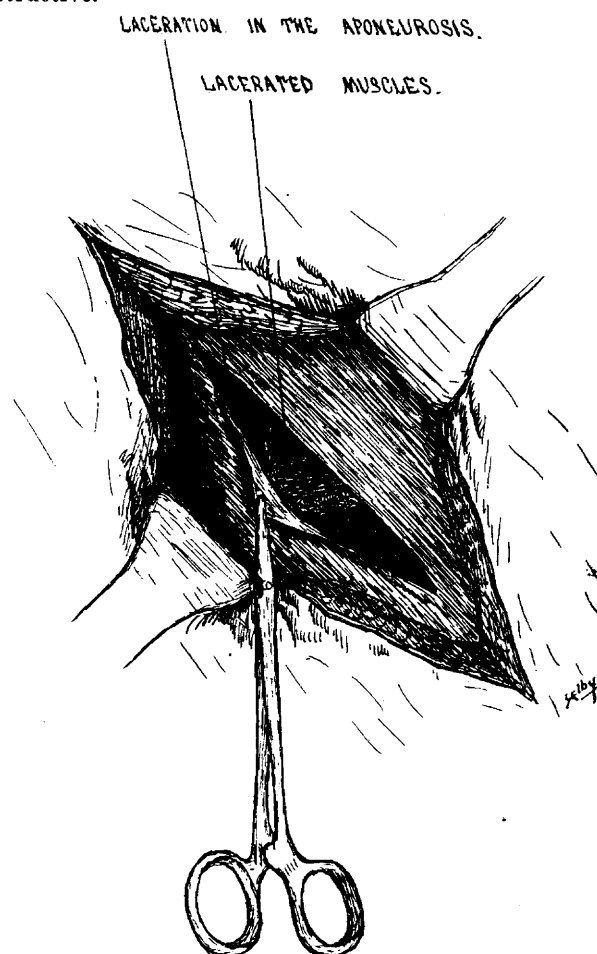
ment for poisoning by mercury. Elimination should be encouraged by copious introduction of liquids, possibly better by enteroclysis or hypodermic injection of saline solutions; proper stimulants should be given, and the particular symptoms treated as they arise.]

DIRECT ABDOMINAL HERNIA OF TRAUMATIC ORIGIN.

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This case is interesting, perhaps more in its origin than in the lesion produced, though none the less instructive.



Patient.—A man, aged 32, laborer, was employed with a wheelbarrow on a scaffolding six feet from the ground, when a misstep caused him to fall, the wheelbarrow following and the handle striking him in the right iliac region.

Examination.—When first seen, a short time later, there was a soft hemispherical mass, 6 cm. in elevation and 8 cm. in diameter, in the region of the injury, with but slight abrasion and no discoloration of the overlying skin. Extreme pain prohibited manipulation, but as the diagnosis was apparent the man was sent to the hospital. There, when placed in a recumbent posture, the mass receded, and a hiatus could be felt in the supporting structures of the abdominal wall. In fact, the margin of the lacerated aponeurosis was plainly palpable.

Operation.—Under ether anesthesia an incision was made parallel to Poupart's ligament over the break in the wall, which was 4 cm. above the ligament. The ruptured aponeurosis was evident. The break was clean cut as though produced by a knife, following, of course, the fiber of the tissue. The internal oblique and the transversalis beneath were torn away

1. See Taylor's Medical Jurisprudence"; also Blyth, A. W.: "Poisons, Effects and Detection"; Sachur: Berlin. Wochchr., 1892; and Meeres: Lancet, Sept. 16, 1871.