be more accurately described as cases of hæmorrhagic small-pox or not. Such cases as these usually prove fatal, and then the question is purely an academic one. Sometimes they recover, and one is inclined to look on any slight evidence of hæmorrhage as accidental; but in rare cases the signs of hæmorrhage are very well marked, and yet recovery takes place.

Such a case was that of a man who came under the care of one of us on the fourth day after he was taken ill. He was twenty-one years of age, had been vaccinated in infancy, and had six large vaccination scars. There was present when he came under observation a fairly plentiful, discrete, papular small-pox rash. He had profuse hæmaturia, vomited some slightly blood-stained material, and there was oozing of blood from the gums. He was greatly prostrated and his mental faculties were in partial abeyance. The lower part of the abdomen was covered by a profuse erythematous and petechial rash, which also extended across the back. Although the condition of the patient appeared to be so grave, the facies and general appearance of the patient differed from that usually present in cases of hæmorrhagic small-pox, and a cautious prognosis was given. In the course of two or three days all signs of hæmorrhage disappeared, and the man rapidly recovered, there being no secondary fever. No albumin was afterwards found in the urine. There was never any other sign of nephritis, and there was no history of the patient having previously suffered from hæmaturia. An attack of nephritis occurring in the course of a case of small-pox is extremely rare, and we have never known it to occur at such an early stage of the disease.

It will be seen that this case is very similar to that described by Dr. Robinson. It is suggestive that both patients were vaccinated, and that in neither case was the papular rash abundant. Although it would not be accurate to say that in all cases of hæmorrhagic small-pox the papular rash when it occurs is abundant, such is undoubtedly the case in general. We doubt, however, whether the explanation Dr. Robinson offers is the true one, but we are not prepared to discuss the difficult question whether or to what extent vaccination has the effect of altering the course of events in cases of hæmorrhagic small-pox.

Hospital Ships, near Dartford.

CASE OF CHRONIC TETANUS TREATED BY TIZZONI'S ANTITOXIN; RECOVERY.

BY H. EUGENE TRACEY, M.B., L.R.C.P. LOND., M.R.C.S. ENG.

ON Nov. 16th, 1894, I was summoned to see a girl aged seven years who was supposed to have "something wrong with her face." I ascertained that a fortnight previously she had sustained two slight burns, one on the forehead and the other on the left leg, the scars of which were still visible. On Nov. 14th it had been noticed that the child could not fully open the left eye and that she appeared to be smiling continually. On examination I found tonic spasm of the orbicular muscle of the left eye, which was marked enough almost to bring the eyelids together; well-developed risus sardonicus, more marked on the left side of the face; rigidity of the muscles of the neck, back, legs, and abdomen, producing extension of the head, and moderate opisthotonos. The patient could separate her teeth for almost half an inch, could swallow small quantities of liquid, and speak indistinctly. The temperature was normal. I prescribed bromide of potassium (ten grains every four hours) and absolute rest and quiet. On Nov. 17th the patient had a severe spasm in which the chest was fixed and the face black, the temperature rising to 99·8°F. On the 18th another convulsion had occurred during the night, and one also occurred in the afternoon. The temperature was 99°. In the evening I administered hypodermically one-eighth of a grain of sulphate of morphia as she refused to take medicine by the mouth. On the 19th she had been taking very little nourishment. This induced me to try to pass a soft red rubber tube by the nose for feeding purposes, but as this attempt immediately produced a convulsion I had to desist. In this convulsion the body was held rigid, the face was contorted and livid, and the respiration was suspended. I succeeded in giving a nutrient enema of milk treated with Fairchild's powder, which was retained, and during the day I administered hypodermically two tabloids, each containing one-eighth of a grain of sulphate of morphia. On the 20th the patient had been taking more nourishment during the night, but during the day she was not so well, having had two serious convulsions. On the 21st, at 6 A.M., I was summoned, as the patient had had two further convulsions. I administered a quarter of a grain of sulphate of morphia. At 5 P.M. she had another convulsion, and at 8 P.M. yet another, owing to changing the draw-sheet. I then administered the first dose of Professor Tizzoni's antitoxin (obtained from Messrs. Allen and Hanburys), injecting one and one-eighth of a gramme under the skin on the inner side of the thigh, using a syringe kindly lent to me by the British Institute of Preventive Medicine. On the 22nd, at 8 A.M., I was again summoned, and found that the patient had had nine convulsions during the night, recurring (according to the attendant's statement) at almost exact intervals of one hour. I witnessed a fit myself, the pulse being 80 before and 150 afterwards. I injected a second and similar dose of antitoxin. The child was somewhat delirious after this injection, and continued to have fits all day at intervals of from five to ten minutes. I was sent for again at 5 P.M., and the patient had a fit just after my arrival. By holding her hand and speaking soothingly to her when the clonic spasms were beginning to spread over the muscular system I succeeded in so far modifying their severity that there was no recurrence of the lividity of the face, foaming at the mouth, or rigidity of the chest walls. The temperature was 100·8° and the pulse 116. Before leaving I succeeded for the first time in moving the child on to a sofa in order to have the saturated bed linen changed. I again injected one-eighth of a grain of sulphate of morphia, but administered no antitoxin. On the 23rd, at 11 A.M., the pulse was 112 and the temperature 102·5°. No fits had occurred during the night, but frequent clonic spasms. At 5.30 P.M. the pulse was 80 and the temperature 100·5°. No recurrence of fits supervened. I injected five-sixteenths of a gramme of antitoxin. On the 24th the pulse was 68 and the temperature 98·6°. Frequent clonic spasms were occurring. I administered one-eighth of a grain of sulphate of morphia. At 8.30 P.M. I administered five-sixteenths of a gramme of antitoxin. On the 25th, at 10 A.M., the clonic spasms were of frequent occurrence. From 8 to 10 P.M. they recurred every quarter of an hour. I injected the sulphate of morphia as before, and five-sixteenths of a gramme of antitoxin. From the 26th to the 30th, the supply of antitoxin being exhausted, the treatment resolved itself into the daily injection of morphia and atropine, but the child made little or no progress. On Dec. 1st, having obtained another bottle of antitoxin, I recommenced the daily injections, administering five-sixteenths of a gramme every evening for a period of seven days. Meanwhile the condition of the patient improved rapidly, the clonic spasms diminishing both in force and frequency and some relaxation of the tonic contractions of the muscles taking place, specially of those of the neck, jaws, and face generally. At the end of the week the improvement was so marked that I ceased to inject either antitoxin or sulphate of morphia. Recovery was completed without further incident, the rigidity of the muscles disappearing some days after she had ceased to be troubled with clonic contractions.

Apparently in this case the most noteworthy feature of the action of the antitoxin beyond its general beneficial and curative effect was the strong reaction the first large subcutaneous injection caused, the pulse and temperature of the patient rising and the fits being temporarily increased both in virulence and frequency.

Willand, Cullompton, Devon.

MISSION TO THE DEEP SEA FISHERMEN.—Mr. F. W. Willway, M.R.C.S., a Bristolian, who has recently returned from Labrador after spending eighteen months in medical mission work there, gave an interesting lecture in Bristol last week, narrating some of the difficulties and hardships of the work. He described the coast journeys in the mission vessel in these dangerous waters, and his itinerary mission journey of last winter, when with sledge and dogs he covered 1200 miles.