metatarsal bone, the temperature rising to 101° F. On July 1st the right foot was generally very much discoloured, of a dusky purple colour, shading off towards the normal skin into a violet or pinkish hue. The affected areas were very tender, the patient strongly objecting to their being touched. He was very restless and kept constantly moaning. The end of the ring finger of the left hand became discoloured on July 2nd; the nail bed looked cyanosed, the skin of the dorsum of the hand being of a deep dusky hue. Small phlyctenæ were noted on several of the toes. The pulse in the left radial artery could easily be felt; it was regular and of good force. The patient was better subjectively on July 3rd and the affected areas were less painful, the left ring finger being no worse. The right thumb and right forefinger presented a mottled pink appearance, but no improvement was manifested in the feet. The left foot was of a lobster tint, the ends of the toes being quite black and shrivelled. A large collar of various sized bullæ surrounded the left ankle. On July 9th the affected fingers were diligently fomented. The toes of both feet were mummified and were of a mahogany red tint; the bullæ about the ankles ruptured, leaving an offensive-smelling surface. The patient was kept under the influence of morphine, and the gangrenous areas treated antiseptically. The hands were apparently well by July 12th, but the toes had become of a blue-black tint. On July 20 the plantar aspect of the left foot was black, and its toes much shrivelled. A deep and clearly defined line of demarcation was evident at both ankle-joints, the ligaments of the joints were exposed, and the pain unabated. In about

a week's time spontaneous amputation of both feet had occurred, no surgical interference being required. The boy afterwards suffered from abscesses about the left hip and other parts, but eventually made a satisfactory recovery and seemed apparently none the worse in general health from his serious illness. The following points of interest were also noted. The heart and lungs were normal; the spleen was not palpable. The ungual phalanges showed no tendency to clubbing; the patient had not a high palate, and there was no muscular wasting, and at no time was there any effusion into the affected joints. The tips of the fingers and toes did not show any evidence of scars—little scars at or near the nail on the pulps of the fingers and toes being, as is well known, characteristic evidence of antecedent attacks of Raynaud's disease.

Remarks.—In the case just recorded the usual etiological factors in the causation of the affection could be eliminated, such as constitutional diseases, toxic agents as ergot and arsenic, febrile disorders, injury, and frost-bite. Writing on Raynaud's disease, Lanceraux¹ says: "Without pretending that all symmetrical gangrenes of the extremities have a toxic origin, I affirm that the symmetry of these lesions is an almost unerring indication of the toxic nature of the original cause of the affection." The perfect symmetry of the affection in this case would accordingly be indicative of a toxic origin, and manifestly implies that the condition owned a

general and not a local causation. From the point of treatment the absence of objective signs before the actual appearance of gangrene and the presence of subjective symptoms as pain are noteworthy in the prodromal stage, as possibly benefit might follow the administration of vasodilators. It is by no means uncommon to meet with cases of Raynaud's disease as young as this patient. The late Dr. J. E. Morgan of Manchester² collected and analysed 93 cases. Of these the youngest was two years and a half old, and the oldest fifty-nine years; 54 were females and 39 were males. Twenty-four of the 93 cases were under the age of ten years, and the younger the patient the more acute was the disease. Mr. D'Arcy Power³ recorded a case in a girl aged four years and eight months. Dr. Abercrombie,⁴ in an interesting and instructive paper, has commented on the relation of hæmoglobinuria, malaria, and jaundice to attacks of Raynaud's disease. As already mentioned, nothing abnormal was noticed in the urine in this case, and no polyuria was recorded. In the case of two children suffering from Raynaud's disease Dr. Haig⁵ noted an excessive excretion of uric acid, and that the renal vessels were apparently constricted at the same time as the cutaneous. In a contribution to the subject of idiosyncrasies Dr. Solomon Solis-Cohen⁶ designates by the term "vasomotor ataxia" the condition of instability of the mechanism of the circulation present in certain individuals, and which is characterised by an abnormal readiness of disturbance, with tardiness of restoration, of the equilibrium of the cardio-vascular mechanism. Among the recognisable exciting influences he mentions temperature, especially cold, emotion, reflex excitation of an internal or visceral origin, and various toxic agencies. Vaso-motor ataxia, he considers, may be acquired, congenital, or inherited. It is often present in several members of the same family, and may in some cases be characterised by parietic phenomena; in others it may be of a spasmodic character. Thus, in Raynaud's disease, we have in the "local syncope" stage an example of the "constrictive" variety type. Cases of Raynaud's disease are not infrequently associated with various cutaneous affections, such as urticaria, mottlings, scleroderma, and telangiectases, but the present case was not associated with any such trouble. Mr. Hutchinson⁷ has recorded cases of symmetrical gangrene of the extremities with scleroderma, and also cases of diffuse morphœa, preceded by conditions resembling Raynaud's disease; and he considers that we can gather round the interesting condition of neuropathic gangrene a family group of other conditions of equal interest and allied to it. The treatment adopted in the case related consisted in the free employment of morphine to subdue the pain and quiet the nervous system, the gangrenous areas being treated antiseptically. There was no reproduction of the gangrene in the stumps or in their vicinity, and the patient is now in the enjoyment of excellent health.

I am indebted to Dr. Mitchell Bruce for kind permission to publish this case.

Harley-street, W.

A CASE OF HYDROPHOBIA.

By SAMUEL LODGE, L.R.C.P. EDIN., M.R.C.S. ENG.

A BOY aged three years and five months was bitten by a dog in the palm of the right hand about two months before I saw him. He was immediately after being bitten taken to a druggist and the wound was freely cauterised. The hand and arm became inflamed, requiring to be poulticed for two or three days. After that time the wound healed, but the boy continued restless, jerking his limbs when he slept and moaning from time to time. He appeared to be pretty well, however, playing about as usual during the day. There remained a hardened spot on the hand all the while, which the child said was always painful. Nothing more particular was observed till Sunday, Jan. 13th. On the morning of that day the patient complained that his throat was bad, and in the afternoon a medical man was sent for. Some medicine was supplied, but not a drop was taken; he

² THE LANCET, July 6th, 13th, 20th, and 27th, 1893.

³ THE LANCET, July 29th, 1893.

⁴ Archives of Pediatrics, October, 1886.

⁵ St. Bartholomew's Hospital Reports, 1892.

⁶ American Journal of the Medical Sciences, February, 1894.

⁷ Archives of Surgery, vol. ii., 1891.

¹ The Medical Week, vol. ii., No. 26, p. 301, 1894.

tried many times to swallow a dose, but did not succeed. The next day the medical attendant was informed of the dog-bite for the first time; he did what he could to encourage the parents, who were much alarmed, and in their excited state it appears they actually forgot to tell him that the boy could not swallow the mixture. I was sent to the case on Jan. 14th at 3 P.M. The little patient was clinging very closely to his mother's neck; he made some inarticulate sounds and seemed greatly excited; he struggled continuously, but did not loosen his hold on the neck of his mother for an instant. A young woman washing dishes at a table near was splashing water about rather noisily. She desisted at my request, when the suffering child became quiet, relaxed his clasp, and smiled. There was a little girl in the room who now approached him. He gently stroked her face and hair, saying "Mary, Mary." After about ten minutes had elapsed a teaspoonful of water was offered him, but he no sooner saw it than he clenched his teeth and screamed. This was tried many times and in various ways, but he could not be induced to swallow the smallest quantity. He did himself try once or twice, but the effort was too great and ended in the same way. The jaws became fixed. There was spasmodic contraction of the thoracic muscles, and inarticulate cries. Exactly the same effect was induced by the mother of the child drinking some water when she endeavoured to persuade him to swallow. After every paroxysm there was a flow of saliva; sometimes viscid, sometimes frothy, and at other times watery. A clean handkerchief was handed to him, which he used unceasingly, wiping the mouth, and occasionally twisting and thrusting it into the throat till he appeared to be almost suffocated. When an opportunity occurred I examined the boy according to rule. The tongue was white and enlarged; the pulse was 100 and of fair volume; the temperature did not appear to be high (I could not ascertain it precisely, of course). The pupils were widely dilated. The expression of countenance was gentle and dreamy. The respiration was natural. The examination described in these few words was made at intervals and with great difficulty. The friends were recommended to have the case removed to the infirmary, and on this step being objected to Dr. W. A. Evans, medical officer of health for Bradford, was communicated with. My friend saw the patient in my absence, and thus had the opportunity of forming an independent judgment. At 5.30 P.M. my assistant, Mr. W. M. Muat, saw the child and observed the same train of symptoms. Perfect quietude was observed in the house. The patient frequently held out his hands for the glass of water always in readiness, but directly it was passed towards him he became violently convulsed. At 11.30 the same night he was visited again; he was then sitting on the couch in a peculiarly excited condition, tearing a newspaper into small pieces and talking incoherently; if his attention was suddenly attracted he became sensible for a moment, but relapsed immediately. He was never still, raising himself from his seat and falling back continually. Saliva was running from the mouth all the time; this he wiped away in the manner before described, forcing the handkerchief into the mouth and occasionally clutching his throat with both hands. The poor child expired quite suddenly about three o'clock next morning. There was no inquest.

I ought to mention that the dog, having bitten the child, was tied to a chair in the house of its owner, where it contrived to strangle itself. The body of the creature was sent to one of the destructors, so we had not an opportunity of examining it.

Bradford, Yorks.

THE REMOVAL OF PATIENTS TO ISOLATION HOSPITALS.¹

By G. H. FOSBROKE, M.R.C.S. ENG., D.P.H. CAMB.,
COUNTY MEDICAL OFFICER FOR WORCESTERSHIRE, AND PRESIDENT OF
THE WORCESTERSHIRE AND HEREFORDSHIRE BRANCH OF THE
BRITISH MEDICAL ASSOCIATION.

As the question of providing isolation hospitals is now coming prominently to the front, and I have been officially connected with two such institutions in rural districts for many years past, it occurs to me that my experience with

¹ A paper read at the Midland Branch of the Society of Medical Officers of Health on Jan. 3rd, 1895.

regard to the distances patients suffering from infectious diseases can be safely removed to hospital may be of interest to some. Having carefully considered the question, I have come to the conclusion that, assuming the locality to be non-mountainous, the highways good, and suitable ambulances (with attendant nurses) provided, such persons may without harm be removed as far as eleven or even twelve miles. Table I. shows the distances patients have been removed to six hospitals in Worcestershire and Warwickshire.

TABLE I.

	Alcester.	Evesham.	Kidderminster.	King's Norton.	Solihull.	Warwick.	Total.
Under 1 mile	302	9	11	—	39	—	361
From 1 to 2 miles ...	73	61	28	85	95	268	610
„ 2 to 3 „	67	4	741	331	138	—	1281
„ 3 to 4 „	—	26	57	311	75	1	470
„ 4 to 5 „	205	64	8	104	145	20	546
„ 5 to 6 „	362	72	7	274	16	55	786
„ 6 to 7 „	138	17	—	22	11	—	188
„ 7 to 8 „	42	2	20	3	16	7	90
„ 8 to 9 „	3	—	6	—	19	21	49
„ 9 to 10 „	2	—	2	—	11	9	24
„ 10 to 11 „	—	—	—	15	3	36	54
„ 11 to 12 „	—	—	—	7	18	—	25
Total	1194	255	880	1152	586	417	4484
Population of hospital district	17154	15072	38258	28300	29822	55200	—
Area in acres of hospital district	55071	47679	35129	22454	48693	68300	—

From this it will be seen that 242 patients in the above districts have been removed distances of from seven to twelve miles. I have selected these hospitals because I am personally acquainted with all of them, and have been officially connected with the Alcester and Evesham Hospitals since their establishment in 1875 and 1887 respectively. The majority of the cases removed to these hospitals were scarlet fever; the remainder were small-pox, diphtheria, and typhoid fever, there being comparatively few of the last named. It has been the custom in these districts for the medical adviser to state whether or not the individual patients are fit for removal and on that certificate the ambulance is sent. Thoroughly good ambulance arrangements and provision are in my opinion absolutely essential. It is by this means that it has been found practicable in London to transport cases of fever and small-pox (for distances equal to and even greater than those above mentioned) to the hospital and hospital ships of the Metropolitan Asylums Board. This has been done now for several years with safety to patients who are certified by their medical advisers to be fit for removal. In my opinion the powers conferred on county councils by Sections 6, 7, 8, and 9 of the Isolation Hospitals Act, 1893, should be utilised in rural and small urban districts to their fullest extent, inasmuch as the constitution of hospital districts including extended areas is generally conducive to efficiency as well as economy. Sections 6, 7, 8, and 9 of the Isolation Hospitals Act just referred to read as follows, viz. :—

“6. The county council may direct an inquiry to be made by the medical officer of health of the county as to the necessity of an isolation hospital being established for the use of the inhabitants of any particular district in the county, and in the event of such medical officer reporting that such an hospital ought to be established for the use of the inhabitants of a district, may take the same proceedings in all respects for the establishment of such hospital as if a petition had been presented by a local authority for the establishment of an isolation hospital for the district named in the report of such medical officer of health.

“7. The county council shall conduct the local inquiry into the necessity for the establishment of an isolation hospital, and as to the proper site for the hospital and the district for which it is to be established (in this Act called the hospital district), by a committee consisting of such number of their members either with or without the addition of such other persons or in such a manner as the council think expedient. All expenses properly incurred by any such committee shall be paid as hereinafter directed. The local inquiry shall be held subject to such regulations and otherwise as the council think fit. Due notice of the time and place at which any inquiry is to be held by the county council shall be given in such manner as the county council may think the best adapted to inform any persons interested, and such persons may attend and state their case before the members appointed to conduct such inquiry.

“8. (1) Every hospital district constituted under this Act shall consist of a single local area or two or more local areas as defined by