ducts are easily removed for the most part by washing out the bladder, from which indeed they usually escape spontaneously. I append outlines of the exact size of such concretions, scores of which now in my possession have been so removed, and which it has never occurred to me to regard or to report as cases of stone in the bladder. I may add that exact outlines present to the eye an idea of magnitude exceeding that conveyed by the body itself, as anyone may observe by placing one within the outlines given.

1. A concretion weighing 2 grains.

2. " " 3 " (this is a rather flat one).

3. " " 5½ " (this is cylindrical, or nearly so).

4. " " 7½ " (this is cylindrical, or nearly so).

The largest measurement is of course given in every case.

Thus in my cabinet of calculi, now numbering about 950 cases removed by operation, with the history of each appended, there is not one weighing less than 20 grains, and I have never accepted or reported an example beneath that weight as a "stone." I have crushed many from that weight downwards to 5 or 6 grains, and had I so regarded them could report at least 1,100 cases instead of 950. I still venture to think that most of my brethren will agree with me that 20 grains is the very lowest weight, in the adult, the removal of which should be esteemed an operation for stone in the bladder. And in chronic prostatic retention cases, where the phosphatic concretions so frequently and so rapidly form, I have never recorded anything as a stone which has not reached at least half a drachm.

There is another aspect of the matter, too, which cannot be lost sight of. I think that it is very undesirable, from more than one point of view, to convey an impression to any patient from whom a bit of gravel weighing 2 or 4 grains has been removed that he has undergone an operation for stone in the bladder, and that the custom might give support to objectionable practice.

I beg to submit these remarks to the consideration of my professional brethren, in the belief that it is desirable to have some general understanding as to the meaning of the term in question, and to adopt, if possible, a uniform method in the employment of it in future.

CASE OF RAYNAUD'S DISEASE, OR SYMMETRICAL GANGRENE.¹

By J. W. F. SMITH-SHAND, M.D.,

Professor of Practice of Medicine, Aberdeen University; Senior Physician to the Royal Infirmary.

GENTLEMEN,—I must premise that the case I am going to bring under your notice to-night is that of a girl of excitable nervous temperament, of but moderate intelligence, and of questionable habits. Great difficulty has been experienced in getting an accurate account of the previous history, more especially with reference to the occurrence of "chilblains" and other points, for what she affirmed to-day she would contradict to-morrow. My examination of her always seemed to make her very nervous, particularly in the presence of students; and thus I asked Mr. Shirras, the house-physician, to undertake the narrative of the case, as I supposed she would be more at her ease with him. Consequently it is mainly to him that we are indebted for the following history.

J. A., aged 20, a servant, was admitted into the Royal Infirmary on May 24th, 1887, complaining of pain in the hypogastric and lumbar regions, with frequency of micturition, which symptoms, she stated, had been present for the last four days. Her appearance was striking, as the face was much flushed, the lips swollen, with the mucous surfaces of a purplish colour, and a general erythematous redness all over the body. The skin was moist, and the patient said her body felt hot. Her face was heavy and dull in expression.

Three hours after admission her temperature was 104°, respirations 40, pulse 125 per minute. On physical examination, heart

sounds normal, pulmonary percussion normal. On auscultation, breath sounds harsh. No cough or expectoration. Liver normal; spleen slightly enlarged; tongue dry and coated with white fur; great thirst; appetite bad; bowels confined. There was marked tenderness on pressure over the lumbar regions. Urine scanty, specific gravity 1030, acid reaction, dark yellow in colour, with sediment composed of lithates and pus; upper portion showed trace of albumen.

On the 25th the temperature was 104.4°, but, under the use of antipyrin, fell to 101.6° in the evening. As she said she was unable to pass urine, the ward sister used the catheter and drew off 42 ounces.

Twenty-four hours after admission she complained of great pain in the ears, and shortly afterwards symmetrical black patches appeared on the lobes, and after some time became filled with dark serum. Soon after this other black patches appeared symmetrically on each cheek and on the point of the nose. Still later, on the following day (26th), other symmetrical spots were seen on the face and neck, on the arms, hands, and legs above each knee. No patches appeared on the trunk, fingers, or feet. The largest patches were on the arms. The one on the right measured seven inches in length and three and a half in breadth; the patch on the left arm measuring five and a half in length and three in breadth. Before these patches appeared the patient complained of a severe burning sensation in the parts, which was greatly intensified on pressure. They appeared suddenly, and were of a very black colour; the margins were distinctly marked, there being no shading of colour. The surface of the patches was covered with moisture. After the patches appeared the general erythematous condition diminished very considerably.

For eight days the patches remained as described, but after that a reddish border appeared around them, and by the tenth day they began to shrink in length and breadth, and by the thirteenth day sloughing sores had formed on the arms, and were dressed with carbolic oil and enveloped in cotton wadding. The ulceration was quite superficial. The patches on the ears, cheeks, and neck shrank and disappeared, leaving a small thick crust, which gradually got smaller and dropped off, leaving on the left ear a certain amount of atrophy of the tissue. On the ninth day after admission the lumbar pain and frequency of micturition began to abate, the pus and albuminuria diminished, and by the eleventh day these symptoms had completely disappeared. Since then her only complaint has been of thirst, and pain when the arms were being dressed. The temperature ranged high for over three weeks, the maximum being marked on May 28th, when it was 104.6°. During the second week of her illness she had diarrhoea for several days, having five stools on June 3rd. The treatment consisted in giving ten-grain doses of antipyrin for the first three days every six hours, and afterwards a mixture containing arsenic and strychnine every six hours.

Previous History.—Patient, up to the age of 16 years, enjoyed good health, but since she first menstruated (when 17 years old) she has always suffered more or less from dysmenorrhoea and irregular menstruation; she menstruated last on May 7th. She told Mr. Shirras that she often complained of chilblains in the winter time, and suffered more or less from cold hands and feet. She denied this to me, but said that four years ago, when she was in the House of Nazareth, she, along with many others, had little red lumps about the size of pins' heads on her fingers, and that the nails cracked and came off, and at present the nail of the forefinger of the left hand is fissured. This winter she told me she suffered from cold hands and feet, and her hands were blue and swollen, but "not like chilblains."

On April 28th of this year she was admitted into the Infirmary under me, but during my absence from home, complaining of severe pain in the lumbar and iliac regions, and retention of urine. Mr. Williamson, then house-physician, considered this last symptom as hysterical, and refused to draw off her urine, and in a short time she passed it all right. At this time a bulla, about the size of a five shilling piece, developed on her left hand. It was very painful, containing at first clear serum, but rapidly becoming purulent. It was punctured, and in three days had quite healed; she was dismissed on May 7th "cured."

Under the date of July 4th I have to report that the patient says she is quite well, that the ulcerated surface on the left arm has been perfectly healed for the last three days, and that on the right arm there are now two ulcerated spots, one about the size of a sixpence, and the other being half an inch in length and half an inch in breadth.

¹ Read before the Aberdeen Medico-Chirurgical Society.

RIGHT SIDE.

LEFT SIDE

REMARKS.—This is the first case of Raynaud's disease which I have observed, so-called after Raynaud, who made it the subject of a thesis in Paris in 1862, and who then brought together twenty-eight examples of this morbid condition. It has, as a result of this and of an article written by him in the *Dictionnaire de Médecine et de Chirurgie*, of late years been brought more prominently before the profession. But for many years previous to this isolated instances of this disease have been recorded in the medical journals.

From the special character of the symptoms it has also received the names of symmetrical gangrene and local asphyxia, and the opinion now held of its nature is that it is a neurosis due to vasomotor disturbance. At my first visit this was the view I took of the case before us, but I was at first inclined to believe that it had been brought about by some toxic influence—that the patient had been taking some drug such as belladonna, which had produced the great dilatation of the cutaneous capillaries, but she stated that she had been getting no medicine before admission, and when the gangrenous patches made their appearance, the nature of the disease then became apparent.

Notices of this affection are singularly rare in systematic works of medicine. Quain's *Dictionary of Medicine* gives three lines to it. It is not mentioned in Ziemssen's *Cyclopædia of Medicine*, beyond a short reference to gangrene from ergotism, a condition which it somewhat resembles, but in this case the nature of the patient's food did not allow of such an explanation of the symptoms. A good description of the disease is given by Dr. Allen Starr, in Pepper's *System of Practical Medicine*, an American work of great value. My case, however, differs in certain important respects from the picture there drawn.

It is there stated that while the disease commences suddenly in all cases, the local symptoms as a rule are more marked than the constitutional, and that these local symptoms begin with pains usually limited to the tips of the fingers and toes. These pains are commonly followed, and rarely preceded, by a condition of (1) ischæmia, (2) cyanosis, or (3) erythema.

1. Ischæmia. This first stage Raynaud described as the condition of local syncope, in which the fingers more frequently, and the toes more rarely, are involved, and look pale, shrunken, and dead, owing to the diminished quantity of blood flowing through the contracted arterioles. This condition may pass off in a short time, in which case the arterial spasm relaxes, and the parts resume their normal appearance; this change, however, being generally accompanied by a feeling of burning pain. But if this arterial spasm be of long duration, then the second stage of cyanosis is certain to be reached.

2. Cyanosis. This stage, Starr says, must result from one of two conditions; "either the arterial spasm is so complete that no blood passes into the part, in which case venous blood from lack of *vis a tergo*, or in response to gravitation, regurgitates into the capillaries, distending them and producing a state of blueness; or a venous spasm occurs, preventing the exit of blood from the part, which then becomes actively congested, and the blood in the capillaries, from want of renewal, soon becomes venous and produces the cyanotic appearance. This stage of local asphyxia may be of variable duration, from hours to days, and may terminate in a gradual return to the normal condition, but more usually it is followed by gangrene.

3. Erythema. Some doubts have been expressed by various observers as to this being a true stage, because it has sometimes been found to be of a more permanent character, while at the same time it is seldom followed by the death of the part.

The experience of my case, however, I consider warrants us in the conclusion that it is a true stage. This condition of erythema may be ascribed to a paralysis of the vaso-constrictors, or to an irritation of the vaso-dilators.

When the stasis of blood in the vessels has been extreme, this is followed by gangrene and death of the part, and the symmetrical manner in which this is brought about constitutes the special character of the disease. The most frequent site, as I have said, is in the tips of the fingers, the least frequent the arms. As a rule the gangrene is limited and superficial, although in rare cases the terminal phalanx of the fingers may be entirely lost. This gangrene, it has to be observed, is not dependent upon embolism or upon any diseased condition of the coats of the vessels, and as a rule is only noticed in the tips of the extremities, so in this respect also my patient forms an exception to the rule.

The constitutional symptoms consist of headache, mental depression or irritability, disturbed sleep and loss of appetite. Tem-

porary albuminuria, hæmaturia and glycosuria, have also been observed. Starr says that "fever never occurs as a symptom of the disease, and if present, must be ascribed to some other condition." Now, in my patient I could find no other condition to account for the quick pulse and high temperature, and I looked upon the latter symptom as being purely nervous, and solely due to irritation of the heat-regulating apparatus.

This brings us to a consideration of the nature of the disease. Raynaud believed it to be of central origin, while Weiss, a recent writer, considers it to be a reflex neurosis dependent upon any peripheral irritation. Certain it is that it is most common in young adults, in females rather than males, and that menstrual disorders have been observed in a large number of the female cases, while in one third of all the cases a recurrence of the disease has been found to take place within a year of the first attack.

Fearful as the appearance of my patient was at the height of the disease, so much so that the ward sister thought it impossible that she could recover, I yet gave a favourable prognosis, as no fatal result has yet been recorded, so far as I know, of a genuine case of the disease.

No special plan of treatment has been found beneficial, beyond general tonics, the occasional use of sedatives when pain is severe, and when gangrene is present, using some antiseptic dressing, and raising the affected limbs well on pillows, while they are kept warm and enveloped in layers of cotton wadding.

ABSTRACT OF A LECTURE ON AMBULANCE WORK IN CIVIL PRACTICE.

By RICHARD DAVY, M.B., F.R.S.E.,
Surgeon to the Westminster Hospital.

GENTLEMEN,—There is scarcely a day passes in hospital or private practice without some special form of conveyance being required for our patients, either for convalescent or urgent necessity. Conveyance of a patient may be a very simple matter, as, for instance, the use of a stretcher or chair to carry him from one room to another, or a really complex undertaking, such as the transport of an enfeebled or injured man from one point of the kingdom to another, or from Great Britain to the Continent. I have endeavoured to practically overcome many of these difficulties, and have now the pleasure of explaining to you the construction of our hospital ambulance, which is the generous gift of one of our governors, the Rev. T. S. Echalaz, M.A., and which has been designed throughout by myself.

The woodcut will give you a good general impression of the carriage and a patient placed in it ready for transport. The carriage part of the mechanism, the stretcher, the cradle, and hood are all portable and easily detached, and will be described separately. The carriage part consists of four 26-inch iron wheels, supporting on springs two grooved bars firmly braced together on either side for the stretcher poles to fall into; these poles are fixed at any point by means of two clips, so that there is no danger of tilting, and the weight trimming is adjusted to a nicety. Four wheels have been used in this hospital ambulance, for the general advantage of the stretcher being ever safely on the wheels, and for the whole arrangement being used as a convalescent couch or airing vehicle. For my own use (and I have now superintended many hundreds of journeys) I have two wheels only; but, for careless or nervous hands, four wheels are safer than two; this, moreover, is the common experience of carriages in general. Remember that by proper adjustment this ambulance can be driven on two or four wheels, so the wheeled framework consists only of a sort of perambulator pattern, receiving the poles of the stretcher instead of the carriage body. The stretcher itself is so well known now as not to call for any full description; it consists of two hickory poles, two cross bars, and a sheet of red duck canvas; the two cross bars are of iron, and at either end have forged on