complete the operation if the ovaries are not disturbed. If healthy, I think they had better be left alone, and so may the Fallopian tubes. But if the disease has extended high up the uterine cavity it would be safer to remove the tubes; and this would add very little to the duration of the operation.

I shall not attempt to give the results of this operation statistically, but it is important that we should know what a few of the most experienced operators have been able to accomplish. Leopold wrote to me on the 11th of this month, stating that up to that date he had performed total extirpation of the uterus by the vagina in 83 cases with only 5 deaths, a mortality of 6 per cent. Péan, writing on the 13th, says that from 1882 to the end of 1887 he had done 22 operations, 15 successful, but with 7 deaths; but that this year he has had 16 cases, all successful and no deaths. Professor Olshausen, of Berlin, appears to have the largest experience of this operation, for he writes to me that between May, 1887, and November 5th, 1888, he had 99 cases with 13 deaths. In 1881-82, he had 22 cases with 8 deaths; from January, 1883, to April, 1887, 31 cases with 5 deaths = 53 cases in Halle with 13 deaths, to be compared with 99 in Berlin, also 13 deaths. All these were cases of total extirpation by the vagina for cancer. He has had 1 case where seven years have elapsed without recurrence, and 3 of five years and upwards. Martin, of Berlin, who had previously published 66 cases where cancer led to the operation, with 11 deaths, or 16 per cent. mortality, writes on the 16th of this month:—"Since the Washington Congress in 1887, I have performed the vaginal total operation in 22 instances" (he does not say in how many for cancer). "All recovered but one, who died of hæmorrhage. Of supravaginal amputation I performed altogether 6 with one death." It would be easy to collect a very large number of cases, such as Schroeder, 59, with 5 per cent. mortality; Fritsch, 60, 7 per cent. fatal. But these do not bring us later than 1886, and they all tell the same story of greater success following larger experience.

As to the comparative mortality of infra- and supravaginal amputation and total excision, the results vary so much in successive years and in the practice of different operators, that I have been unable to collect materials for a trustworthy contrast either as to the immediate fatality or as to the frequency of recurrence of disease, but it certainly appears that recurrence is earlier after partial than after complete operations. In some series the remarkable fact comes out that supravaginal amputation stands the test of recurrence better than complete excision. This would be inexplicable if it were not for the probability that the disease had been generally much further advanced in the cases where total excision was performed than in the others.

Our American brethren have been before us in adopting the operation of total excision of the uterus, and, as elsewhere, their results have improved with time and experience.

The cases hitherto performed in this country have not been enough to serve for any comparison of results with those abroad, but there have been many successful cases published since that of Mr. Jennings, five by Dr. Purcell, and others by Dr. Duncan, Mr. Reeves, and Dr. Sinclair, of Manchester; and they all teach the lesson that if the operation is to be successful it must be done early, before surrounding structures are involved in the disease.

There are other parts of this subject on which I should like to say much more. I wished to allude to cancerous disease of the ovary, and to say how difficult it is to decide whether an ovarian tumour is innocent or malignant, even after it has been removed and carefully examined. Now I can do no more than support the rule to operate early as the best way to avoid recurrence. I wished also to remind you how the mortality after amputation of the breast and after removal of other parts affected by cancerous disease has been so much lessened by modern sanitary science that all the old arguments against operating at all in cases of cancer require revision. I wished to say something about inadequate operations, and about operations which are unnecessarily severe—and much more than I did say against operating in hopeless cases, and in studying how to "soothe where we cannot save." Of cases which especially interest us, where cancer has affected the lips or tongue, the œsophagus, the larynx, the pylorus, the spleen or kidneys, the intestines, the bladder, and the female genital organs, I have not time to say another word.

And now, in conclusion, I will only venture to express the belief that if some who have heard or who may read this lecture are convinced that cancer is increasing, and will try to find out the cause of the increase, and why cancerous diseases are so prevalent and so fatal; and if they will also try to learn how to

prevent or to cure them, no one can forecast the result. No one could have imagined that a forgotten book of Marco Polo would rouse the spirit of research in Columbus, and lead to the discovery of a new continent; and no one can foretell what the work of one man may accomplish. It may be trifling, but

Think nought a trifle, though it small appear,
Small sands the mountain, moments make the year,
And trifles life.

Each one may bring his offering, however small, to the altar of one of the temples of Esculapius; or, if his own search for knowledge fail, he may assist in preventing the failure of others, and in guiding them along the path to full success. And, year after year, the Morton Lecture may exert some influence for good upon all mankind in all coming generations.

[Some paragraphs of the lecture were not delivered for want of time.]

OBSERVATIONS

ON

TWO CASES OF RAYNAUD'S DISEASE (SYMMETRICAL GANGRENE).

WITH CHRONOLITHOGRAPH.

Read in the Section of Medicine at the Annual Meeting of the British Medical Association, held in Glasgow, August, 1888.

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ALTHOUGH numerous instances of the remarkable train of symptoms constituting the disease which bears the name of its eminent discoverer, M. Maurice Raynaud, have of late years been recorded, and although the subject has received considerable attention and discussion, it must be admitted that there remain many points both in its etiology and pathology which are still unsettled, and respecting which further information is much to be desired.

The main phenomena of this affection, when typically manifested, are, as is well known, the sudden occurrence, after it may be various sensory disturbances, of marked ischæmia, affecting in general portions of the extremities, particularly the points of the fingers and toes, but sometimes other parts, such as the lobes of the ears, tip of nose, etc. This displays itself in two or three stages. At first the affected parts present the appearance of so-called "dead fingers," being pallid and cold like the fingers of a corpse. Pain, often of intense character, is present; but along with this there may be numbness and other perverted sensations. The affected textures, too, are often abnormally hard and resistant. These symptoms, constituting the *syncope locale* of M. Raynaud, are held to depend upon arrest of blood-supply from spasm of the arteries. They may soon pass off, and the circulation being restored, the parts regain their normal condition and appearance. But in many cases this stage continues, with, it may be, intermissions over a series of days, and further vascular changes emerge in the form of extreme lividity, together with swelling of the affected localities, due to their engorgement with venous blood (*asphyrie locale*), which is held to depend either upon backward flow into the capillaries, or upon an actual spasm of the veins themselves arresting the return blood. Painful burning feelings and other sensory disturbances are present during this stage. The whole symptoms, however, may still pass off, or they may increase, and, with or without a further state of erythematous change, advance to gangrene. This gangrene is usually of the dry form, and superficial in extent, involving the upper layers of the skin of the points of the fingers or toes, which separate, leaving an ulcerated surface, which cicatrises with some amount of loss of substance, or, it may be, of one or more phalanges. Occasionally, but rarely, the gangrene is of much greater extent. The disease usually affects young adults, and it appears to be liable to recur, particularly on the return of any exciting cause, of which exposure to cold is one of the most potent. It may vary greatly in intensity

and duration. It is comparatively seldom met with, and, therefore, the occurrence of two well-marked cases within little more than a year, both presenting special features of interest in relation to the pathology of the disease, appears to justify in some measure my occupying, for a brief period, the time of the Section in narrating their main particulars.

CASE 1.—*M. K.*, aged 16, worker in a wholesale confectionery establishment at Musselburgh, was admitted to the Edinburgh Royal Infirmary on January 20th, 1887, complaining of severe pain and swelling of both feet, particularly of the left, which had existed since January 3rd. The following details of the illness were obtained from herself and from Dr. Craigie, who had treated her for some days prior to her admission into the hospital. On Saturday, January 1st, after prolonged exposure and fatigue in walking through the streets in melting snow, she felt a sense of extreme chilliness in both feet, which, however, soon passed off. Two days afterwards she was attacked with pain in both feet, which lasted but a short time, and did not prevent her from going out to her work. Each day during the week she had a return of the pain, lasting for several hours, and attended with feeling of tightness in the feet, which she tried to relieve by changing her boots. The pain daily got worse, and on the 10th she was compelled to take to bed, although it was not until the 13th that medical aid was called. She was then found to be suffering from intense pain in both feet, which were swollen and of blue colour, the toes being extremely oedematous, and appearing as if they would burst. It was noticed that the tinge of the feet varied, being sometimes nearly black, and at other times pale. The pain was liable to exacerbations. The patient's feet were placed in an elevated position, and many soothing remedies tried, but without benefit; and her sufferings and loss of sleep continuing, she was sent to the infirmary on the 20th. There were no points of importance in her family or personal history, except that from childhood she had been liable every winter to attacks of eczema.

State on Admission.—The patient was a well grown but delicate-looking girl, with a transparent skin and some slight eczematous patches behind the ears and on the eyelids. She bore the look of intense suffering, which was evidently paroxysmal and caused her often to scream out, and she had had no sleep for many nights. She would not lie down, but preferred to sit in bed with her legs hanging over—the only position in which she felt any ease. On examining her feet they both presented an appearance of extreme venous engorgement and swelling, particularly the dorsum and toes of the left foot, where there existed a large dark bleb strongly suggestive of gangrene. The congested appearance continued to a less degree backwards as far as the ankle, and even up the outer aspects of both legs, but it was noticed occasionally to alternate with an appearance of pale lividity. Any attempt to touch the feet caused her to scream, and she betrayed an amount of nervous excitement and irritation which rendered examination extremely difficult. Pulsation, however, could be made out in the arteries at both ankles. Besides the pain there were sensations of coldness and numbness of the affected parts, alternating with heat and tingling. The cerebral and mental functions were perfectly normal, and, beyond a slight cough, respecting which physical examination of the chest revealed nothing, all the other systems appeared healthy. The pulse was 120, temperature 101°. My colleague, Mr. John Duncan, kindly saw the patient at my request and noted the symptoms above described. He recognised gangrene as having begun in both feet, but to a greater extent in the left, and he advised washing with boracic lotion and wrapping both feet in sublimated wool. Opiates were administered, and some sleep was obtained.

During the next ten days there was no material change, except that her pain, which was great, was kept under by treatment, and she took nourishment better. The gangrenous condition of both feet became more marked, and assumed the appearance represented in the painting now shown (Fig. 1). The whole of the anterior half of the left foot became shrivelled, mummified, and as black as coal; and it was evident that every tissue in this part had perished. In the right foot the gangrenous appearance was nearly as extensive, but was more superficial, affecting chiefly the true skin, but involving especially the four outer toes. The great toe had escaped, and had a perfectly healthy appearance (Fig. 2).

During the early part of February a distinct line of demarcation was visible on the left foot, and the gangrenous mass began to separate. On the right foot considerable recovery had taken place, and, beyond slight ulceration of skin on the dorsum, the only portions which had been destroyed were the points of the four

toes already mentioned. The pain was now less intense, and ceased to be paroxysmal, but the patient betrayed extreme nervous irritability, especially whenever the affected feet were examined. The vascular engorgement referred to as affecting the hitherto sound parts of the extremities had also ceased. The patient began to look better, and, although thin, was not anæmic, her blood-corpuscles numbering 4,300,000 per cubic millimetre. Throughout all this time her urine, which was free from albumen, contained a large phosphatic deposit. Iron tonics and generous diet were administered; and during the whole month of February the patient's general health improved.

On March 2nd Mr. Duncan removed the left foot by Syme's amputation. Mr. Duncan notes: "The first dressing was made three weeks afterwards, when it was found that the anterior edge of the heel flap had sloughed and separated, its place being occupied by healthy, though rather pale, granulations. In ordinary course thereafter the stump healed soundly, with a good covering and fairly narrow cicatrix."

During the convalescence from the operation the patient began to cough and expectorate large quantities of muco-purulent matter. Physical examination revealed extensive bronchial catarrh, with limited areas of dulness.

On March 15th a trace of blood appeared in the sputum, but neither lung tissue nor tubercle bacillus were discovered in it. The points of the four affected toes of the right foot slowly separated to varying amount. Nearly the whole of the fifth toe was lost, but only the distal phalanx of the second toe. There only remained one entire toe, namely, the right great toe.

The chest complication retarded the patient's progress; but under cod-liver oil, iron, etc., she slowly and steadily improved; and on May 2nd was able to be out of bed. On May 23rd she was able to go out of doors on crutches; and on June 28th she left for a convalescent home in Perthshire. Notwithstanding the continuance of the cough and expectoration (which latterly showed some traces of lung tissue, but no bacilli), the temperature had continued normal, and the patient had gained considerably in weight before she left the infirmary. In Perthshire a small portion of the cicatrix of the stump broke down, and an erysipelatous blush appeared on the middle third of the leg, but this soon passed off, and she made good progress, so that on her return to her home in Musselburgh early in October she had gained much in flesh and was looking and feeling well.

On Thursday, November 3rd, the patient, who had not been exposed, felt a creeping sensation in her right great toe and in the stump of the adjoining toe, and pain began to be severe, while the colour changed to dark blue. She was admitted again to the infirmary on November 7th, suffering great pain in the two toes mentioned, which had a deep purple, almost black, hue. Alternating hot and cold sensations were felt, but the pain was easier when the former prevailed. No pallor was observed, and the stump of the left foot was entirely unaffected. Pulse and temperature about normal. Her health appeared to have somewhat deteriorated, as she was much paler and thinner than when previously seen, and the eczematous condition of the eyelids and ears had returned. Her cough, however, had disappeared. The treatment was similar to that formerly pursued, namely, allaying pain by opiates and wrapping the parts in wool. In two days the pain was greatly better, the dark appearance of the toes less marked, and the patient was soon entirely well. On December 2nd the lobes of both ears became of a dark purple, almost black, tinge. They were wrapped in cotton-wool, and by the 7th the dark colour had passed away. The patient was discharged on December 17th.

On April 24th, 1888, she again presented herself at the infirmary. Beyond slight eczema of the left ear and a little tenderness of the stump there was no morbid condition to be found. She was much improved in general health, and her catamenia, which had been suspended during all the time of her illness, had recently returned. She stated that during the winter months, subsequently to leaving the hospital, she kept her bed almost constantly, owing to the cold weather tending to bring back the pain and discoloration of her foot. But latterly she had been able to go about freely, and is now to be fitted with an artificial foot.¹

¹ In the beginning of November, 1888, the patient, K., was again admitted to the Royal Infirmary for a return of the symptoms affecting the great toe. The "local syncope" and "local asphyxia" were exceedingly well-marked, as were also the characteristic painful sensations; subsequently both ears became affected in a similar manner. The treatment was the same as before, and after about a fortnight's stay in hospital she left quite well.

CASE II.—J. L., aged 16, a kitchen-maid, residing in Edinburgh, was admitted to the Royal Infirmary on April 8th, 1888, complaining of severe pain in the hands, especially the right hand, which had existed for a week. From her statement it appeared that for the past six months she had been liable to attacks of this kind, occasionally affecting both hands and feet, and of varying severity. Eight days before her admission, after a long walk, she felt much pain in her feet and also in her hands. The pain soon passed away from her feet, but her right hand became worse, and she noticed that the tips of all the fingers were blanched. She was unable to sleep on account of the pain, which, however, tended to lessen towards morning. This continued for four successive days, the pain always returning at night, and being most severe in the right middle and ring fingers. She was seen by a medical man, who prescribed for the relief of her pain, but her condition becoming worse she was sent into the infirmary. Her family history was good, as was also her personal history, excepting that her occupation entailed much wetting and chilling of the hands and arms.

State on Admission.—The patient was a tolerably well-nourished and healthy-looking girl, but was evidently suffering severely. On examination of the right hand all the fingers were of a blanched, corpse-like appearance, especially marked in the second and third phalanges, and the nails were absolutely colourless. The points of the fingers were of almost stony hardness. There was great pain in the whole hand, but the affected fingers and a large portion of the dorsal aspect were anæsthetic to touch. The fingers of the left hand were pale and painful, but to a much less extent than the right. Painful sensations were complained of in the toes of both feet, which, however, presented no abnormal appearance. The various systems of the body were found to be in a healthy state, with one exception. The heart and vessels generally were normal, but in the right arm no brachial, radial, or ulnar pulse could be felt. The right subclavian and axillary arteries could be made out, but they were of smaller calibre than those of the left side, and careful measurement showed that the right arm and hand were smaller in circumference by about half an inch than the left, in which the arteries were all normal.

The affected hand was treated with warm opium fomentations, wrapped in cotton wool, and an opiate administered which procured some hours of sleep. On the following day (April 9th) the whole of the right hand was of a uniform pale and corpse-like appearance when exposed (Fig. 3), and excessively painful, but it was noticed that in the course of a minute or two it underwent a remarkable change in colour, becoming deeply purple or livid (Fig. 4), and at the same time somewhat less painful, although the patient asked to have it covered up quickly. On April 10th, the same symptoms continuing, one minim of a 1 per cent. solution of nitro-glycerine was administered every hour for four hours, which the patient stated gave her much relief, although it did not appear to alter the condition of the circulation in the affected hand. On April 11th a dark spot was noticed upon the tip of the middle finger (see Fig. 4), and on the following day a similar spot upon the tip of the ring finger. Pain continued in varying degree, and the patient was irritable and nervous at all times. Considerable areas over the dorsal and palmar aspects of both hands and fingers were more or less anæsthetic. These areas were constantly changing.

April 19th. For the past eight days the patient's condition had continued unchanged, excepting that the pain was decidedly less, and that the hand felt comfortable while enveloped in cotton wool. The two gangrenous patches of skin on the ends of the right middle and ring fingers were separating; there was still alternate pallor and engorgement when the hand was exposed. On May 7th the gangrenous tip of the middle finger came away, and on May 12th that of the ring finger. Healthy looking granulating surfaces were left. From this time the patient improved steadily, the sensory disturbances however continuing in varying amount and locality.

On May 31st she was sent to the convalescent home, feeling quite well. Up till the day of her dismissal the arteries of the right arm were constantly being examined, but beyond the pulsation of the axillary, no brachial, radial, ulnar, or any other pulse could be discovered, an observation confirmed by Mr. Duncan, who had kindly seen the patient with me.

On July 25th she again presented herself. The right hand had a cold feeling, and the fingers generally, especially the three first, were of deep purple tinge contrasting strikingly with those of the other hand, but painless. The cicatrices on the finger tips looked healthy. She used her hand and arm well, but the measurements

showed the same diminution as before, and the absence of all pulses was again confirmed.

It should be mentioned that neither the constant current, nor massage, both of which were employed, appeared to have much effect upon the disordered circulation. Protection by warm wrappings gave marked relief.

These two cases, although differing much from each other in severity, presented in typical form the characteristic phenomena of Raynaud's disease, but yet they both exhibited features of quite exceptional interest.

In the first case the extent of tissue destroyed—namely, the half of the left foot as well as nearly all the toes of the right (and involving amputation of one entire foot)—was much greater than is usually observed in this disease, M. Raynaud himself and all other authorities laying stress upon the fact that gangrene of this peculiar kind rarely if ever entails more than the loss of portions of the pulps of the fingers or toes, or of one or two digits.

In the second case, which was one of much milder character, there existed a remarkable anatomical abnormality as regards the blood-supply to the affected hand and arm. This arrested attention from the first, and up to the present time it has been repeatedly verified. Beyond the axilla no pulse anywhere in the arm or hand could be made out. This was probably a case where high division and unusual distribution of the brachial artery existed as a congenital condition, but that it bespoke an inadequate or inefficient blood-supply to the parts concerned seems a warrantable conclusion from the appreciable difference between the bulk of the two arms and hands, notwithstanding the patient was right-handed, and also from her experience that at all times the right hand got more easily chilled than the left.

These observations raise some important questions in connection with the pathology and etiology of this singular malady. Of the soundness of the position of M. Raynaud in emphasising the large part played by vasomotor disturbance in the evolution of the morbid phenomena, there has been and can be no question, the striking sequence of changes in the local circulation in any well-marked case rendering this abundantly clear. Moreover, the operation of causes capable either directly or by reflex action of profoundly influencing vasomotor nerve-function is traceable in a large proportion of cases. But the question remains, and I venture to think is brought into special prominence by such instances as those I have brought forward, whether there may not be other factors concerned in the disease, of which sufficient account has not been taken.

It may be worth while to state here parenthetically that, as regards some of the recorded cases, other conditions, having affinities with, yet certainly not typically corresponding to, symmetrical gangrene, have been mixed up with it in a somewhat confusing way. This, however, is not surprising when it is remembered that tropho-neuroses generally have many common characters which may oftentimes render their precise identification a matter of difficulty. But it is the well-marked disease which is now under discussion, and in reference to the part played by ischæmia in the production of the gangrene, it may reasonably be asked, Are these vascular changes sufficient of themselves to bring about so serious a result? Let us recall for a moment what these changes are. Taking a typical case, the first thing observed is the deadly pallor, indicating the arrest of arterial flow through the part. It is not certain, however, that such arrest is absolute, but whether or not, it does not seem to be of long continuance at any one time, but is often seen to alternate with a state of engorgement even while one may be looking at the affected part. Moreover, it does not appear to be always present even in genuine cases, and it was certainly absent in the second attack of M. K. It is a condition which may quickly appear and pass off, as one frequently sees in hysterical patients, and it cannot be held to be the direct cause of the death of the part in this disease. I may here quote the following sentences from Mr. Duncan's observations of the girl K.'s case:

"This condition (pallor) did not, I think, in any part lead to death directly; probably it did not last long enough. I do not

2 November 16th, 1888.—The patient called at the Royal Infirmary to-day to report herself. It is observed that the right hand and arm are of more livid appearance and are less warm than the left; and, further, that the entire absence of pulse in the right arm is as conspicuous as before.

3 A case recorded by Professor Grainger Stewart (*An Introduction to the Study of Nervous Diseases*, p. 130), in which extensive gangrene attacked all the extremities, bears some resemblance to Raynaud's disease, but differs in many points from that malady in its clinical history, and Dr. Stewart himself seems doubtful about regarding it as such.

believe that we have yet gauged the viability of a limb kept bloodless, but I know that Esmarch's bandage and tourniquet may be kept on for six hours without injury. The difference between a bloodless and a blood-full part when cut off from the rest of the circulation, is, I take it, very great."

The further stage of the disease is that of cyanosis or venous engorgement, and it obviously possesses special importance, since, unlike the previous stage, it is never absent in any well-marked case of symmetrical gangrene, and always precedes the death of the affected part. The intensity of the engorgement seen in such a case as that of the girl K. appears more suggestive of a condition of what might be called active venous congestion depending upon a spasmodic contraction of the veins, than of passive congestion due to the backward flow of venous blood into the empty capillaries; and the effect, too, appears more in harmony with such a view. Thus mere venous stagnation does not, at least very soon, entail gangrene as a result, but rather œdema; while, on the other hand, sudden and complete venous arrest is a condition which may more readily tend to death of the part, and all the more should there coexist or have recently preceded non-access of arterial blood. But just as it is doubtful whether, in the earlier stage, the arterial spasm is ever so complete or so universal as to occlude entirely the vessels, so in this further stage, even granting (what is by no means certain) that it is due to venous spasm, it is equally doubtful whether this is so absolutely complete and of such continuance as effectually to close every channel for the return blood. Considering, too, the capacity of sound textures to resist morbid influences threatening their vitality, we should scarcely have expected to see so quickly brought about in this way such an amount of destruction as occurred in K.'s case.

If, however, we assume the pre-existence of trophic defect or disturbance in the parts, there is little difficulty in accounting for the result following upon the vascular changes already described. Weiss, of Prague, in an elaborate article upon the subject,⁴ merely mentions this as a possibility, and as giving, according to Virchow's phrase, "eine Opportunität zur Necrose." Such a lowered tissue vitality might be inherent or acquired, and the two cases now submitted appear to give strong countenance to this view.

In the first case (K.) there seemed to have been all along feeble circulatory function, as seen by the ill-nourished skin, and by the tendency to the development of eczema on every return of cold weather, more particularly at the parts furthest removed from the heart. The extreme chilling of the feet during the two days she walked much in the wet and snowy streets would have a marked effect upon already ill-nourished tissue, and in this state the onset of such vascular disturbance as ushers in Raynaud's disease (of which the exposure referred to was doubtless the exciting cause) would be quite sufficient to determine the death of a large extent of texture.

In the second case (L.) a like set of conditions seemed to prevail; but the most striking fact was the arterial anomaly of the right arm, which, although apparently congenital, appeared to involve a chronic lowered vitality of the arm and hand. They were always more easily chilled than those of the left side, and

the tendency to venous stasis in the fingers was very apparent to any observer. The girl had been subject to the symptoms of "local syncope" (dead fingers and toes) during the entire preceding winter, and, after having had the arms much chilled by cold water, "local asphyxia" (engorgement) set in, more markedly on the right side, as might have been anticipated, and ended in gangrene of two finger-tips.⁵

As bearing upon trophic disturbance, reference must also be made to the severe neuralgia which frequently exists before the symptoms of Raynaud's disease set in, and accompanies it in its earlier stages, together with the paræsthesiæ which so commonly prevail. The connection between neuralgic troubles and nutritive changes is well recognised. But do these neuralgic sufferings indicate any appreciable nerve disease here?

An interesting point in this connection may now be submitted. The amputated foot of K. was carefully examined in the Pathological Laboratory of the University by Dr. H. A. Thomson. The blood-vessels leading to the diseased parts were quite healthy. The internal plantar nerve was dissected out, and sections of it furthest removed from the diseased parts were prepared for microscopic examination. These sections are now submitted, and it

will be seen that the nerve had suffered extensively from neuritis, and was now undergoing degenerative change, many of the bundles being entirely destroyed and replaced by fatty matter (Fig. 5). It might, perhaps, be urged that this was a secondary result to the tissues of the affected parts from the changes in them accompanying the gangrene. On the other hand, the appearances were so striking and so unmistakable that they could not be omitted from the investigation of the case, and they are of all the more interest to note, seeing that many now hold that peripheral neuritis probably plays a large part in the morbid process of influencing alike the blood-supply and the nutrition of the texture.

The whole subject is one for further observation and inquiry; but the cases now submitted manifestly possess features so unique as to entitle them to be placed upon record.

Fig. 5.—Transverse Section. Internal plantar nerve $\times 50$, stained by Weigert's hæmatoxylin method, and cut in celloidin. *peri.* = perineurium; *n.b.* = nerve bundles; *f.* = adipose deposit; *n.b.* = nerve bundles where the fibres have lost their medullary sheath.

eruptions and destructive changes, such as carbuncles or even gangrene, occasionally occur. Vasomotor disorder is a feature of this disease. In one of Raynaud's recorded cases of symmetrical gangrene (*Nouveau Dictionnaire de Médecine*, t. xv, p. 650) diabetes set in apparently secondarily, but, under treatment specially directed to the latter condition, the symptoms of both diseases simultaneously disappeared.

THE GLASGOW MEETING.—At a recent meeting of the New York Academy of Medicine, the President, Dr. A. Jacobi, read a report as delegate to the annual meeting of the British Medical Association. Many of the very valuable papers read on that occasion had, he said, already been published, and were familiar to American physicians, but he wished to commend for careful perusal the address of the President of the Association. He enlarged on the value of such general meetings of all orders of physicians.

It is stated that the epidemic of yellow fever in Florida, which has now, with the onset of cold weather, almost or completely ceased, was introduced by bedding brought by persons escaping from Havanna. Up to November 19th there had been 4,621 cases with 402 deaths, a mortality of 8.7 per cent.

⁴ *Zeitschrift für Heilkunde*, B. iii, 1882.

⁵ It is interesting in this connection to recall how, in diabetes mellitus, the skin suffers in its nutrition, and various cutaneous

Fig 1.

Fig 2.

R.B. Johnson, M.D.

Fig 4.

Fig 3.

H. A. Wood, M.D.