be right or I may be wrong, but, at any rate, I think you will all agree with me that the curing of this persistent case of Mérière's symptoms by the simple insertion of a seton when all other methods of treatment had been well tried and proved failures, is well worthy of a trial, and I trust that you, gentlemen, will not wait long when a case of this kind next falls to your lot, before persuading your patient to seize upon this valuable remedy.

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NINE CASES OF CARBOLIC ACID GANGRENE:

WITH SHORT NOTES.

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It has been known for many years that gangrene occasionally results from the application of a carbolic dressing to a finger or toe, and reference to the literature upon this form of gangrene, or rather this method of production of gangrene, shows a fairly large number of instances of this unfortunate accident. Dr. Leusser¹ states that as early as 1871 Tillmann reported three cases of gangrene due to carbolic acid, but that the condition had been generally overlooked, as, when seen after the application of a carbolic dressing, it was supposed to have been due to the injury or disease, and not to the action of the carbolic. He collected 34 cases, in which the strength of the solutions used had varied from 2 per cent. to practically liquid carbolic. Dr. Harrington² saw 18 cases in five years, and, including these, collected a series of 132 cases. He remarks that "the facts are: An aqueous solution of carbolic (1 to 5 per cent.) if applied to an extremity, as a finger or toe, for a number of hours in the form of a moist dressing or poultice may produce gangrene." Probably many instances of this condition have been seen by medical men who have not reported them, and by now, no doubt, the profession generally is on the alert to prevent their occurrence by avoiding the use of carbolic dressings to such terminal parts as fingers and toes, or by using very weak solutions.

Carbolic acid has, however, been for many years almost a household remedy in the treatment of injuries. Doctors have used it so much that, as Leusser says, people believe it to be a specific healing remedy, and it is quite common to find carbolic acid among the medicines kept in the medical cupboard with which so many houses are provided. Midwives, ambulance pupils, and others believe in its virtues, but are unaware of its risks when applied to injured or poisoned fingers. That such risks exist has been brought all too prominently before me during the past year, as I have seen, from this cause, five cases of gangrene of the finger in a period of six weeks, and, a month or two afterwards, a sixth case in which two fingers were gangrenous. As a warning to those who are perhaps aware that such an accident may result from the use of even weak solutions, but who do not know that it is less uncommon than they suppose, and to those who have not had the subject brought before them, I trust I am justified in shortly reporting those cases which I have seen. These are nine in number, namely:

1. A boy, 12 years of age, got a fish hook into his finger. A dressing with carbolic acid oil—1 in 20—was wrapped round it. In twenty-four hours the terminal and second phalanges were dead, and amputation was required.
2. A young man of 20 had a trivial cut on the forefinger. A dressing with carbolic lotion (1 in 20) was applied and rewetted two or three times in the course of a few hours. The skin became quite black. At points the whole thickness was destroyed but amputation was not needed.
3. A middle-aged man had a septic finger. By mistake pure liquid carbolic acid upon lint was applied. Amputation was required. The dressing was in position for eight hours.
4. A young man of 26, with a small septic area upon finger, had a dressing moistened with carbolic lotion (1 in 20) applied for twelve hours. Gangrene resulted and amputation was needed.
5. A boy, aged 14 years, cut his thumb, and a dressing with carbolic lotion of unknown strength was applied and left in position for twenty four hours, at the end of which time the

terminal phalanx was gangrenous. As the limit of the dead tissue was not easily determined I advised delay in amputation. The patient did not return to see me until spontaneous separation through the joint had occurred.

6. A sailor, aged 29 years, cut his finger. The captain of the ship applied carbolic ointment of unknown strength, and gangrene resulted, necessitating amputation.

7. A girl, aged 11 years, had carbolic of unknown strength applied in a dressing to a finger. Gangrene resulted which necessitated amputation.

8. A man, aged 31, had an injury to the soft parts over the second phalanx of the middle finger, rather more severe than in the other cases. A dressing moistened with carbolic lotion of unknown strength was wrapped round it, not, however, including the terminal portion of the finger. Death of the soft parts down to the bone resulted, but the tissues over the terminal phalanx retained their vitality.

9. A girl, aged 18 years, cut very slightly the middle and ring fingers of the left hand. A dressing with, probably, pure carbolic was applied for eight hours. Gangrene resulted, and amputation was required.

Probably pure liquid carbolic was used in at least two of these cases, and a strong solution in two others, but in at least four of the others the preparation used was not more than 5 per cent. In none was a waterproof covering used; in none was there anything to make me suspect that constriction by a bandage was a possible explanation of the gangrene; in every case the original injury or sepsis was, at most, trivial in degree.

In two cases the gangrene was limited to a part of the finger proximal to healthy tissue. This, to judge from reported cases, is unusual, but the explanation of gangrene in these cases may be that in the one (Case 8) the dressing was applied round the middle of the finger and did not include the tip, while in the other (Case 2) complete destruction of the soft tissues was not produced, but only destruction of the cuticle, and at one or two points the whole thickness of the skin.

The appearance of the gangrenous part in such cases is characteristic. The skin at first is dry, wrinkled, and greyish-white in colour; later it becomes darker and more shrivelled. At the junction of the living and dead tissue there is some hyperaemia, and eventually a line of demarcation forms. As it is difficult to tell how much is actually destroyed, it is proper to wait for the line of demarcation before amputation is performed. In no one of the cases I have seen has there been any swelling of the proximal part, but such swelling has been described in some cases. The condition is, as a rule, similar to a typical case of dry gangrene.

That pure carbolic is able to destroy tissue just as many other acids do is well recognized, but that weak solutions, 1 or 2 per cent., can cause gangrene is not so generally known. A few well-authenticated instances of gangrene from the application of such weak solutions have, however, been observed. In some of these a cloth had been saturated with the solution and applied to a finger just as an ordinary water dressing might have been. No constriction of the part had been caused, and no waterproof covering had been placed over the dressing, and yet after some hours complete death of the finger had resulted. Various explanations have been suggested to explain why gangrene occurs. At first it was supposed to be unassociated with the dressing, and due to the wound or disease (frequently a poisoned wound) for which the dressing was used. This was, however, not a satisfactory explanation, as the gangrene was seen to occur in cases of very trivial cuts or slight superficial injuries. Frankenburger believed he proved, by experimental work, that by repeated dressings with weak carbolic acid a direct injury to the blood corpuscles was produced, and stasis and blocking of the vessels resulted, followed by thrombosis; that the capillaries being first affected, then the veins, and, lastly, the arterioles, the result was the part died. Even if this be so, we are still left in ignorance why gangrene should only occasionally be produced, and a further explanation is needed. It has been suggested that some individuals have an idiosyncrasy, and are locally much more susceptible to the hurtful action of carbolic acid than others, and that in them stasis followed by thrombosis occurs more readily, and gangrene results. It is the fact that the portion which becomes gangrenous is generally a terminal part of the body—for example, a finger or a toe. That age, sex, or the physical condition of patients do not apparently influence the production of the condition is seen when we note that it occurs at any age, in either sex, and in those who are in perfect health.

In the present state of our knowledge of the subject it would seem that the theory of idiosyncrasy must be accepted as the most reasonable explanation of carbolic gangrene occurring in the few, while the majority escape, if we remember the enormous number of patients in whom the application of carbolic dressings used to be adopted, and yet the relatively small number of cases of carbolic gangrene which have been reported. This is still more probable if we recall that a few years ago the use of dressings soaked in 2½ or 5 per cent. carbolic lotion with waterproof coverings were much in vogue, more particularly in the treatment of septic fingers.

It is not my desire to make too much of these cases, but it is undoubtedly the fact that very sad accidents occur, and that we cannot foretell when in this simple way a man may be severely handicapped for life. If we had no other means of treating wounds or localized sepsis we should be justified in using carbolic dressings in their treatment, but there are other equally good methods which are free from risk. The doctor in prescribing, the chemist in dispensing carbolic acid in any form, should warn patients that it is a dangerous substance, and that it cannot be used as a dressing to a finger or toe with impunity.

Personally I deprecate the use of such a dressing to a finger under any circumstances.

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AN EARLY SPECIMEN OF TOTAL ENUCLEATION OF THE PROSTATE REMOVED BY THE LATE MR. MCGILL.

By J. A. CAIRNS FORSYTH, M.Sc., M.B., Ch.B.

THERE has been considerable discussion of late as to the nature of the operations on the prostate gland performed by the late Mr. McGill. It is urged by some that all his operations were only partial prostatectomies in which hypertrophied portions of the gland, especially the so-called "middle lobe," were removed piecemeal, and that enucleation as a whole was never practised.

The specimens exhibited by Mr. McGill at the Leeds Meeting of the British Medical Association in 1888 are preserved in the museum of the Leeds School of Medicine. An examination of these shows that the above statement

Fig. 1.—View of upper surface of prostate.

is true in the great majority of cases. Most of the preparations consist of fragments of prostate gland snipped out with scissors or torn off with forceps. In several cases larger masses, presumably adenomata, have been enucleated.

There is one specimen, however, which is undoubtedly a complete enucleation. Its number in the museum is F 150. The description in the catalogue states that it was removed in 1888 from "J. H., aet. 73. The portion of prostate surrounding the urethra laterally and below was removed in one piece."

The accompanying photographs of the preparation, which are two-thirds natural size, give views of the upper

surface (Fig. 1) and under surface (Fig. 2) of the specimen, a piece of glass tubing having been passed through the urethra. The upper surface is smooth, the separation in this region having been very clean. On the under surface the two lobes have been partly separated in the middle line. The specimen weighs 2 oz. It is evident from the photographs that the specimen is what is now termed a

Fig. 2.—View of under surface of prostate.

complete enucleation of the prostate, and has been acknowledged as such by other observers.

Another similar and somewhat larger specimen, removed by the late Mr. Atkinson about the same time, was also preserved in the museum. Unfortunately that specimen cannot now be found.

The claim that McGill and others had performed the operation of total prostatectomy in the late Eighties was no doubt based on the knowledge that this and other specimens existed, and it seems advisable that a description of what was probably McGill's first specimen should be published.

The Oliber-Sharpey Lectures

ON

NEW FACTS IN RELATION TO THE PROCESSES OF

NERVOUS DEGENERATION AND REGENERATION.

DELIVERED BEFORE THE ROYAL COLLEGE OF PHYSICIANS, LONDON, APRIL 29TH AND 30TH,

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LECTURE II.

REGENERATION OF NERVES.

THE chemical meaning of nervous degeneration, to which I alluded in the first lecture, was studied by Mott and myself in correlation with the anatomical appearances which are observable by the microscope. We found it impossible to study this question without taking into account the closely-related subject of nerve regeneration. From the microscopic study of the distal portions of divided nerve trunks, we arrived at the conclusion that the activity of the neurilemmal cells has some relation to the development of the new nerve fibres. At any early stage in degeneration their nuclei multiply; later they participate with phagocytes in the removal of the broken-up myelin droplets; subsequently they elongate, and becoming connected end to end lead to the formation of what some have termed "embryonic nerve fibres." These three stages are illustrated by the drawings from microphotographs shown in Figs. 5, 6, and 7.

We were, however, extremely doubtful whether this appearance really indicated the formation of real nerve fibres capable of conducting impulses, and felt that such