scarlet fever desquamation, (2) septic fever, and (3) relapse of septic fever.

THE GENERAL SYMPTOMS.

The temperature was essentially irregular, and was seen to vary much in different cases; usually, however, the temperature curve was within the limits of from 100° to 104° F., but even in the same case the extreme limits often varied from 98° to over 105°; the diurnally up and down or "spiked" temperature seen in enteric fever or hectic conditions was never observed. As already mentioned, a defervescence took place in many cases with the decline of the rash, which was followed by a rise before each recrudescence, and at this point, which one might term the invasion of the relapse, death frequently occurred. The heart's action was rapid, beating from 103 to 200 per minute. Nervous disturbances, indicated by such symptoms as restlessness, sleeplessness, and muscular tremors, was commonly met with, and in some cases there was marked drowsiness. The progress of the disease was always accompanied by rapid wasting, in a few days the sufferers presenting quite an emaciated appearance. When the urine could be obtained for examination albumen was sometimes found. Septic pneumonia, diarrhoea, or obstinate vomiting frequently supervened where the patient survived beyond four or five days, and rapidly proved fatal. The condition of the throat was most important to the welfare of the patients all through the attack; the ulceration spread over the tonsils, pillars of the fauces, pharynx, and soft palate, and in many cases to the tongue and gums, engaging the deeper structures in the region of the throat, and often producing large irregular perforations of the soft palate. There was also a profuse discharge of muco-pus from the throat and nose, and a foul-smelling ichorous otorrhoea. In fatal cases, as the end approached the secretions of the mouth dried up, sordes formed on the teeth, the tongue became glazed, the lips cracked, and bled on the slightest touch: there was also suffusion of the conjunctivæ, and more or less fixation of the eyeballs, which gave the eyes a staring expression, and finally the patient lapsed into an ataxic condition. When this stage was reached the sufferers presented a very repulsive appearance, and, in addition, a sickly odour pervaded their immediate vicinity.

The duration of the attack varied greatly, the extremes in fatal cases being from two days to thirty, but between 70 and 80 per cent. died during the first week. In non-fatal cases the eruption disappeared in over 80 per cent. within five days, in 15 per cent. from five to ten days, in 1 case it remained till the fourteenth, and in another till the twenty-second day.

POST-MORTEM APPEARANCES.

The most constant morbid appearance found *post mortem* was an inflammatory zone one or two lines wide round the attached margins of the mitral and tricuspid valves of the heart; in this situation in many cases the endocardium was found thickened and injected. The *post mortem* coagulation of the blood seemed to take place in a normal way; more or less congestion of the lungs was seen in almost every case, and in cases where pneumonia was present the anatomical appearances of that disease were found; the kidneys also were usually congested, and where microscopic examination was made "cloudy swelling" was seen. In the other organs no changes were noticed.

TREATMENT.

The treatment may be divided into prophylactic and curative; in the former much can be done by careful attention to the condition of the throat, the removal of the exciting cause by keeping the ulcerated parts in as clean and aseptic a condition as possible is all important. This, in my experience, can best be attained by irrigation. The use of caustics or other irritants during the inflammatory stage cannot be too strongly deprecated. Healthy surroundings, proper diet, and good nursing, are of course most essential. In the way of curative treatment, little can be done except follow up the lines already indicated, and support the patient's strength by every means possible. The administration of drugs, except for the relief of special symptoms, I have not seen attended with any beneficial results.

DIAGNOSIS.

The disease with which this condition is most frequently confounded is scarlet fever, and indeed its occurrence even during an attack of this exanthem is regarded by most authorities as a relapse of the disease. The invasion, the distribution of the rashes in the early stages, and the course which the two diseases run are so entirely different that a diagnosis is easily made; moreover, in cases that arise during the course of other diseases, in addition to the differences just stated, there is an absence of the throat lesion and that characteristic condition of the tongue—signs that should guide us almost more than any other in determining an attack of scarlet fever—but there is no doubt that the eruption when fully developed resembling so closely the intense or blotched rashes often seen in scarlet fever and the subsequent desquamation, combine to render a correct diagnosis difficult if the primary symptoms have not been carefully observed. It is also confounded with measles, röteln, eruptions produced by drugs, urticaria, erysipelas, etc.; and although the eruption sometimes resembles that of measles and röteln, by attention to the invasion the early distribution of the rash and the absence of the catarrhal symptoms found in these diseases—more especially measles—it is always easy to arrive at a diagnosis. In the other conditions named the differences are so many and so manifest that a correct diagnosis should present no difficulty.

THE TREATMENT OF STRICTURE OF THE URETHRA,

WITH NOTES OF SIXTY CASES.¹

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DURING the last three years sixty cases of stricture of the urethra have been under treatment in my wards at the Manchester Royal Infirmary. Of these, twelve were admitted with retention, and three with extravasation of urine, most of the remaining forty-five being sent in from the out-patient department, as their cases were found unsuitable for treatment while attending the hospital as out-patients.

In five of the twelve patients suffering from retention, suprapubic aspiration of the bladder was performed with satisfactory results: in the other seven, the retention was relieved by the usual treatment, opium and a warm bath. As regards the stricture itself, the following was the general course of treatment which was followed out. In every instance, where the stricture was pervious to instruments, an attempt was first made to cure it by gradual dilatation. If, however, after a fair trial, the stricture refused to, or did not readily, dilate, then internal urethrotomy was performed, recourse being had to external urethrotomy only in those cases where no instrument could be passed through the constriction.

GRADUAL DILATATION.

Gradual dilatation was successfully effected in twenty-nine cases, olivary bougies being passed until the stricture would admit a No. 5 (English size), Lister's sounds being afterwards employed, commencing with No. 5-8, and gradually increasing in size up to No. 9-12. As this treatment is frequently carried out by the dressers under the supervision of the house-surgeon or myself, I make it a rule never to allow a fine metallic instrument to be used, on account of the risk of producing a false passage.

INTERNAL URETHROTOMY.

Internal urethrotomy was performed in sixteen cases, where the stricture being resilient or irritable did not yield to gradual dilatation—in every instance with a most successful result. The instrument used was Teevan's urethrotome, screwed on to a filiform bougie, or "ferret," passed as a guide through the stricture, which was divided from before backwards along its upper wall. In every case, preparatory to operation and while a preliminary attempt was being made to dilate the stricture, the urine (which, if not alkaline, was generally neutral or only feebly acid, often

¹ A communication to the Manchester Clinical Society.

containing more or less pus) was sterilised by putting the patient upon a course of salol or boric acid. At the same time to relieve the cystitis, which is usually present to a greater or less extent in severe cases of stricture, absolute rest in bed was enforced, and a warm bath given night and morning; while to diminish any tendency to congestion of the parts about the stricture, the bowels were kept freely open by means of small doses of magn. sulph. given three times a day. The operation was always performed with careful antiseptic precautions, care being taken that the instruments used were perfectly clean. Before the introduction of the urethrotome, the urethra was injected with carbolic oil.

After the division of the stricture and its dilatation with Lister's sounds, Nos. 9-12 to 12-15, all the urine having been drawn off, the bladder and urethra were washed out with boric acid lotion, and an iodoform bougie was then introduced into the urethra and left in contact with the wound at the seat of division of the stricture. No catheter was afterwards retained in the urethra, and no instrument was passed until the third or fourth day, when a Lister's sound No. 9-12 was introduced into the bladder, and this was repeated each morning until the patient left the hospital, which he was usually able to do at the end of about a week from the date of the operation. Performed with these simple precautions, and in suitable cases, internal urethrotomy is almost absolutely free from risk, for I have never seen it followed by hæmorrhage, nor by the severe attacks of urinary fever, characterised by rigors and high temperature, which so frequently occurred in the days when antiseptics were not employed, and which were doubtless due to absorption through the wound in the urethral wall of septic or toxic elements present in the urine.

EXTERNAL URETHROTOMY.

External urethrotomy was performed in 15 cases. In three instances, where the patients were suffering from extravasation of urine upon admission, a modified Cock's operation was at once performed, the urethra being opened behind the stricture, which was at the same time also divided from the perineal wound. In the remaining 12 cases the stricture was impervious to the finest instrument, not admitting even a filiform bougie, and it was not until attempts at catheterism, repeated at intervals of two or three days, often for several weeks, had proved unsuccessful, that recourse was had to external urethrotomy.

In each case an attempt was made to perform Wheelhouse's operation, which consists in opening the urethra in front of the stricture, passing a fine probe-pointed director through it, and, guided by this instrument, the constriction is divided from the perineal wound. My experience of this operation agrees with that of Mr. Jacobson,² who says: "I have found the hitting off of the mouth of the stricture to be a less simple matter than would be gathered from Mr. Wheelhouse's account." Mr. Treves³ also writes: "There is often some difficulty in detecting the orifice of the stricture," the operation being one which requires "infinite patience." In several cases it was impossible to find the mouth of the stricture, so that it was necessary to open the urethra behind the constriction (as in Cock's operation); and then to divide it by cutting forwards on to the end of the staff.

In 4 of the 12 cases of external urethrotomy, the operation was followed by a fatal result, and in 3 this was readily accounted for by the state of the kidneys, which were extensively diseased, being typical examples of the conditions usually described under the general term of "surgical kidney." In the fourth case death was due to pelvic cellulitis spreading from the perineal wound.

As, whatever the treatment, a stricture is sooner or later sure to relapse unless it is occasionally dilated, the patients were in several instances taught to pass a catheter before leaving the hospital in order that they might be independent of surgical assistance in the future; and when this was found to be impracticable, they were directed to come to the outpatient room from time to time for the purpose of having an instrument passed.

² *The Operations of Surgery*, 2nd edition, p. 961.

³ *A Manual of Operative Surgery*, vol. ii p. 630

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

NITROGLYCERINE IN VOMITING.

THE writer has used nitroglycerine systematically for the last three years in every form of vomiting he has met with, and as it is a drug which is not incompatible with other drugs likely to be employed under such circumstances, while it has proved of the greatest service throughout, he thinks it may be as well to record this use for it, as he can find no mention of it as a general remedy in vomiting. In vomiting in gastric catarrh, whether adult or infantile, acute or chronic, alcoholic or anæmic, he has found it to act almost as a specific. The vomiting ceases at once. In a case of vomiting in advanced pregnancy he found it of the greatest service, and in some cerebral cases it also markedly checked the sickness. In peritonitis alone it increased the vomiting, not, however, to a distressing extent, and the effect soon passed off. He ventures to suggest that this may prove a point of diagnostic value in doubtful cases. In vomiting in connection with pulmonary phthisis it proved of little value, where atropine stopped it for the time. In combination with catechu it acted very well in several cases of lenteric diarrhoea. The vomiting of influenza was often relieved by it, though not to the same extent as by atropine. He has seen no bad effects from its use.

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ON THE IMMEDIATE ARREST OF HÆMORRHAGE FROM THE NOSE.

BETWEEN eleven and twelve years ago I sent a clinical memorandum to the BRITISH MEDICAL JOURNAL on the immediate arrest of nasal hæmorrhage. I tried to show that in the great majority of cases the actual loss of blood and the necessity of stopping it are sufficient motives for prompt action. Very seldom can it be right to let the bleeding go on; whether the matter be surgical or purely medical, there is at least no harm in checking the flow for the moment; and when this is accomplished, the philosopher in his study may consider what local or constitutional means should be adopted to guard against the accident in future.

At a meeting of the Royal Medical and Chirurgical Society on April 12th, 1881, a distinguished surgeon exhibited "a simple instrument for plugging the nares in epistaxis. It consists of a bag of india-rubber, which, after insertion in the nares, can be inflated with air to the required size, and, exerting equable pressure, speedily checks the hæmorrhage." This report gives the impression that the principle of the instrument was a novelty, and that no one had ever heard before of air inflation as a means of stopping bleeding from the nose.

An instrument of this kind was, however, described by the late Dr. Taaffe, of Brighton, in the *Lancet* for January 4th, 1873. The defect of Dr. Taaffe's instrument was that the inflated surface was not large enough, and shortly afterwards a more perfect instrument was devised by Dr. Cooper Rose. An account of it appeared in the JOURNAL for January 10th, 1874. In an improved form it is again described and represented by figures in Mr. W. Spencer Watson's book on *Diseases of the Nose and its Accessory Cavities*. Essentially it consists of a gum elastic tube about 5 inches long, with lateral perforations near the end, and covered with thin caoutchouc membrane in the form of a spirally-twisted bag for the last 3 or 4 inches of its length.

To use it, the membranous bag is smoothly folded over the contained tube, and, having been smeared with diluted glycerine, is passed along the floor of the nose until it reaches the pharynx. The bag is now inflated, and the air is kept in by turning a stopcock as soon as sufficient tension is obtained. The instrument is now made in a still more effective form. The membrane is cylindrical, and when filled with air it resembles an inflated sausage.¹

¹ Figures of this form are in the catalogues of Messrs. Burge and Warren and of Messrs. Weiss respectively.