

eruptive fevers before the attainment of that age, the remarkable analogy which exists between these four cases of calculus, I think, will go to prove that that class of fevers is more frequently than has hitherto been supposed the origin of that formidable disorder, stone. The question, then, as to how far the formation of uric acid calculi, particularly amongst children, may be influenced by the eruptive fevers, becomes of great importance. It is now occupying my attention, and I hope soon to be able to place before the profession conclusive evidence as to the relation of exanthematous fevers to calculous disorder.

The operation adopted in the four cases just recorded, was that now universally practised by all operating surgeons. In the two first of the preceding operations, the button-headed bistoury was used for carrying the urethral incision onwards into the bladder; in the two last, the one knife alone was used. This latter method I much prefer, particularly when operating upon children; it has many advantages, and that of saving delay and confusion in changing the knife is not amongst the least. To a steady hand it is equally safe or safer than the other. What can be more simple than, when having opened the membranous portion of the urethra on the staff, gradually to depress the handle of the knife, so as to keep the point slightly upwards and prevent it slipping out of the groove, then to continue the incision the necessary length before withdrawing the knife, and thus to complete the cutting part of the operation? The opening into the bladder should be small, as small as possible. It is better to be obliged to make a second incision into the bladder than to make too large an opening at first. Mr. Martineau was well aware of that fact, and it was owing to that precaution that he attributed his great success, having lost only two patients out of eighty-four, upon whom he had operated. The opening when made should represent a cone, the apex being in the bladder. Great attention should also be paid to the position of the patient on the table; a firm bolster should be placed under his loins, so as to depress the pelvis as much as possible. In the after treatment, the patient should be placed in bed, with his pelvis slightly depressed, to allow the urine to flow freely. Some surgeons introduce a canula into the bladder through the wound; others do not. Sir Benjamin Brodie recommends it in certain cases; the late Mr. Liston also used it. It has certain advantages, and I think ought to be invariably introduced for the first eight or twelve hours. In certain cases chloroform causes suppression of urine, as it does secretion of milk when used in labour. In such cases the wound becomes glued up with effused lymph, and plugged up internally by coagulum, so as to obstruct the flow of urine, which latter, when once established, the canula may be removed. In cases of hæmorrhage, small pieces of lint or sponge could be introduced around it, so as to arrest the bleeding. Small doses of opium are given to allay pain, and of all the preparations the solid opium is the best; the bowels are kept quiet; the parts kept clean by frequent daily ablutions; the knees are tied together to prevent motion; and the patient is ordered to keep very quiet. This constitutes the sum total of an ordinary case. The surgeon cannot pay too much attention to the minutiae of an operation; it is often to the strict observance of such detail that he owes his success, and by far too often has he to deplore the loss of his patient by his neglecting these simple preparatory measures, which are the groundwork of all success.

Porchester-terrace North, Hyde Park, March, 1857.

ON

TRAUMATIC GANGRENE.

By JOHN HAWKES, Esq., M.R.C.S.E., Devizes.

IN attempting to save a mortified limb from the knife, questions of great practical interest are wont to arise: first, as to the distance of time to which the operation may be safely deferred; secondly, the proper site for this, when it has been determined. Confining attention to that description known as traumatic gangrene, I will briefly consider the respective merits of two plans of treatment commonly pursued; one of which may be termed the prompt or primary operation, compared with the late or secondary.

It is, I believe, generally laid down by hospital surgeons, who are our chief authorities on this subject, that in order to secure safety to the patient a timely operation is necessary, and that when this has been performed the chances in his favour are considerably better than when it has been delayed.

Speaking on this point, Mr. Stanley says, "The limb must be at once removed to afford the patient the least chance of life."

A boy, aged fifteen, was admitted into St. Bartholomew's Hospital, whose hand had been crushed in a printing machine. Three of the metacarpal bones were broken, and the soft parts seriously injured. In two or three days the fingers of that hand were quite black, the inflammation spreading up the elbow. The arm was amputated about the middle, the wound, after a little erysipelatous inflammation, suppurating freely. The erysipelas subsided, the wound granulated healthily, and the boy recovered. "Had I not operated," said Mr. Stanley, in a clinical lecture from which the above case is quoted, "the boy would certainly have died."

A healthy lad, aged ten, was admitted into a provincial hospital, with a severe laceration of the right hand, extending between the thumb and forefinger and across the palm. The margins of the wound were easily approximated, the hand supported on a splint, lightly bandaged, cold-water dressing applied, and the boy removed to bed. In twelve hours' time the thumb had become cold; in twenty-four hours the lips of the wound were found gaping, the adjacent parts flaccid and discoloured, a thin fetid fluid escaping on pressure, which gave great pain; thumb dark and livid; two fingers cold. In twelve hours more, mortification had spread across the palm; the fingers were now, like the thumb, livid and without sensation. Within the last few hours the patient had lost his natural healthy look; he was now pale and restless; pulse small and frequent, and odour from the part intolerable. Phlegmonous inflammation now appeared on the under surface of the forearm; there were redness and swelling, and the peculiar hard, brawny feel consequent on serous infiltration. A consultation was held, and, chiefly in consequence of the last-mentioned symptom, amputation was held inadmissible. The hand and forearm were therefore enveloped in a large poultice till the mortified members had come away, when, from the nature of the injury and the failing powers of the patient, it was judged expedient to remove the hand a little above the carpus, which was accordingly done, and the boy ultimately recovered. I thought at the time, and think still, that in this case the operation should have been performed much earlier, and consider the grounds for not operating hardly justifiable.

This brings us to the second point—the choice of site. Mr. Stanley says, in the case first cited, "It is not necessary to perform the amputation at a distance above the seat of inflammation; the incisions may safely be carried even through the inflamed part."

In the following case the danger of delay and the truth of the last remark are both exemplified:—

An old woman, aged sixty-eight, insane, sustained an injury to her right forearm in falling from a low stool. The exact nature of the injury was obscure, and the treatment adopted simply palliative. When I first saw her, about a week after, a dark patch not unlike ordinary ecchymosis was seen on the outer side, about three inches from the carpus. No crepitus or other sign of fracture could be discovered; the hand was kept prone, and attempts to move it caused pain. For two days the hand and forearm were supported on a straight splint, and the parts covered with spirit lotion. At the expiration of this period the livid hue and dusky mottling of incipient gangrene had gradually spread over a larger space; one or more vesications had formed, and the splint, having been repeatedly removed by the patient, was discontinued. In about two days more, during which no particular constitutional disturbance occurred, the mortification had crept over the under or anterior surface of the arm. The nails and fingers were now livid; the hand tumid, but retaining its natural warmth. Soft parts about the seat of disease had assumed an angry, inflammatory blush; they were generally tender, œdematous, and brawny to the touch, appearances which extended for some inches above the condyles, and were now making rapid progress up the limb. Meanwhile the patient was losing ground; her aspect had become anxious and depressed; her pulse rapid, weak and intermitting eight or ten beats in the minute; it was evident she was sinking. I therefore removed the arm by the flap operation, amputating the humerus at its upper third, and carrying my incisions freely through parts already inflamed. Comparatively no blood was lost,—an important point in such a case,—and the patient, still under the influence of chloroform, was removed to bed. The pulse, that had been previously almost flickering, now regained its regular beat, and intermissions disappeared. The subsequent progress of the case afforded most encouraging proofs of the necessity for adopting a decided line of conduct in the treatment of traumatic gangrene.

Devizes, March, 1857.