

form of pyrexia he believes is generated by the presence of urine in the wound, and the intensity of the attack is not always relative to the amount of injury sustained by the urethra. Death has sometimes resulted upon the mere introduction of a catheter or bougie. The lecturer bases his discussion upon the two following enunciations:— (1) The relationship between urine and a wound which leads to the development of urine fever; (2) the probable nature of the influence or material producing it.

The following is extracted from the lecture which appears in the *Brit. Med. Jour.* for Jan., 1888., as bearing upon these two important practical points:—

"In the first place, it appeared to me that the development of urine fever might be traceable to the kind of contact that existed between a wound and the urine. I thought I would test it in the following way. Taking a number of cases of sub-pubic urethral stricture, which were unfitted for treatment by dilatation, I adopted the following procedure:—

Internal urethrotomy having been performed, and all obstruction being removed, so that a full sized grooved staff could be passed into the bladder, the patient was placed in the lithotomy position, and a median cystotomy was performed, quite independent of the previous internal operation, so as to admit a full sized drainage tube, such as I usually employ for this purpose, to be passed into the bladder. By this combination of internal and external urethrotomy I treated a considerable number of urethral strictures of the worst type with results which time has already shown have been eminently satisfactory, both so far as the immediate comfort of the patient was concerned and the permanency of the relief that was afforded.

After a number of trials of this kind, I soon found that as was my drainage, so was my freedom from fever; urine fever only occurred where the former was imperfect. When urine, even in very small quantities, was pent up in a recent wound, fever resembling ague invariably followed. When, on the other hand, urine was allowed to escape freely and continuously, as after a lateral lithotomy, no such symptoms were developed. But, further than this, in connection with the operative treatment of strictures, it was observed with much uniformity that, in cases where it was impossible to obtain

perfect urine drainage, the urine might, so to speak, be sterilised by local or general measures. This tended considerably to prevent the urine undergoing changes and yielding products which were calculated by their absorption to produce this special kind of fever. For instance, I found that after an internal urethrotomy, certain antiseptic precautions, directed towards the wound as well as the bladder, for the purpose of acting against the latter, considerably reduced both the frequency of these attacks as well as their severity. This was chiefly noticeable in connection with the use of solutions of corrosive sublimate for irrigating the wound, as well as for retaining within the bladder. Further, it was impossible not to recognise the importance of certain drugs which, by their elimination in some degree through the urine, seemed to render the latter less capable of exciting a specific fever where it remained in contact with a recent wound. This was most marked in the case of quinine, which is so largely eliminated by the urinary apparatus. In some cases of internal urethrotomy that were observed, the production or not of urine fever could be largely influenced by the administration of quinine. As bearing upon the sterilism of urine in connection with operative procedures on the urinary apparatus, I will refer to a passage from a recent writer who, in bearing testimony to the value of boracic acid as a prophylactic against urethral fever, states that in some forty urethrotomies he had had but one case of urethral fever, and that occurred in an instance where the precaution of sterilising the urine by the administration of boracic acid had been accidentally omitted. The consequence of this was a violent chill on the third day after the operation, with a high temperature. These observations, then, taken collectively, seemed to me clearly to indicate that the kind of contact between fresh urine and a recently made wound was in itself sufficient to determine the occurrence of urine fever as a consequence.

I now pass on to notice, in the second place, the probable nature of the influence or material by which the fever is actually produced.

During the last few years some important investigations have been made relative to the development of animal alkaloids, both in the dead and living, by Messrs Gautier, Peter, and Bouchard, in France; and by Drs. Lauder Brunton and A. M. Brown, in this country. An address of much in-