

passed out by the patient. This has proven to be a most valuable addition to former treatments, but the objections to this scheme of treatment are that even a soft catheter is more or less an irritant to the mucosa, already disturbed by the passage of a sound; and again the soft catheter may force into the bladder some of the lubricant used on the instrument and which has adhered to the urethral mucosa. The disadvantage of this consists, not only in the possibility of introducing micro-organisms from the urethra in the lubricant, but also, in the case of an insoluble lubricant, by the theoretical possibility of the matter introduced forming a nucleus for stone. It may here be interesting to note that Rovsing found in a post-mortem examination of a patient dead from typhoid fever, the urinary bladder half-filled with vaseline collected there by daily catheterization for two months. Another objection is that the urethra is but imperfectly and perhaps superficially washed out by the extrusion of the injection from the bladder.

We have now stated the prophylactic measures most usually employed and have seen that, although the injection of an antiseptic solution through a soft catheter into the bladder is far better than doing nothing in the way of washing out the bladder, still this method has certain objections. And here, perhaps, it will be well to consider other matters which may be of the utmost importance.

Swinburne has demonstrated that an instrument should never be passed into the bladder while a discharge containing micro-organisms is present, thus showing the necessity of the constant use of the microscope by all genito-urinary surgeons. This rule is made practical through the knowledge that with irrigations by the method about to be explained, all micro-organisms seen in a discharge can be removed for a period long enough to permit the safe use of the sound, and which, if used properly, will have the mucosa in a normal condition before their return.

Another important point is that a sound or other instrument should not be used without first thoroughly irrigating the urethra, and if possible the bladder also, with a hot antiseptic solution, and repeating this immediately after instrumentation. This second irrigation, however, may be supplemented or its place taken by an instillation of 2 per cent., protargol into the bladder. Here I may mention an improvement suggested and adopted by Swinburne. A set of sounds which resemble an Ultzmann's syringe are used by him. The sound is tunnelled, and so made that it may be screwed to a syringe barrel. Thus, before withdrawing the sound, the surgeon may instill into the bladder about an ounce of a 2 per cent. solution of protargol. Rovsing, also, is a firm believer in the instillation of a germicide into the bladder after instrumentation, he having used for nearly ten years past a 2 per cent. solution