first twenty-four hours. The next instrument used was Thompson's divulsor, over a whalebone guide. This was introduced at the office, without ether, rapidly screwed to No. 7, and withdrawn; *much blood followed*. *There was no chill*, nor the least unpleasant symptom. Gradual dilatation (with steel instruments) was now resumed. On the *first introduction* of No. 9, *without any force*, the patient being in fine condition—taking cod-liver oil and quinine daily—*another chill followed*, with fever which ran nearly as high as on the former occasion. At the next visit, Thompson's divulsor was passed and screwed to No. 12; not the shade of a bad symptom was noticed. The patient was satisfied with this degree of dilatation, and left the city for his home, passing No. 12 weekly; emptying his bladder thoroughly; never getting up at night; fatter, healthier, and happier, than he had been for years.

Remarks.—Nothing in the surrounding circumstances of this gentleman justified his chills. It was not lack of quinine; it was not any known effect of cold; it was not any physical or mental depression. It was not any violence nor (probably) any "intoxication urineuse;" for No. 9 passed very easily and produced a chill, while with the divulsor on two occasions great force was used without causing chill, although a raw, bleeding surface was left in the urethra, over which the urine freely passed. The patient's urine was acid, his kidneys healthy, the amount of cystitis very slight.

Case XII.—Mr. ——, a merchant of thirty-eight, somewhat overworked, but in general good health, had severe gonorrhœa at sixteen, and "knows" he has had stricture for twenty years. About ten years ago he had retention. He applied to a physician, who, after prolonged but fruitless attempts to enter his bladder (drawing much blood), gave up the attempt. Hot applications brought entire relief, after several hours. The patient had no chill. Since that time he has had no further retention, and has never had any thing like a urethral chill. The urine passed after breakfast was neutral, clear, not at all decomposed, and contained no appreciable amount of pus. There was slight excess of earthy phosphates in solution. Kidneys perfectly healthy.

Examination revealed stricture at four inches, only admitting with difficulty the finest filiform whalebone bougie. Patient was ordered to take gr. x quinine daily. The exploration produced retention (lasting several hours) but no chill.

Several days afterward, Thompson's divulsor was introduced over a whalebone guide, the patient being in his own room, in which he was ordered to stay for twenty-four hours. He took gr. v quinine after the operation, which he was ordered to repeat at night and morning. Twenty hours afterward he had severe and prolonged chill, followed by intense headache and fever, and on the following day a plentiful outcrop of herpes labialis.

Remarks.—A healthy man with urine normal, kidneys sound, who has retention twice, once spontaneously, once after instrumentation, but never any chill, takes quinine, is divulsed and severe chill and fever follow.

FOREIGN BODIES IN THE URETHRA.

The most varied substances are found in the urethra, introduced by the patient under the influence of that perverted and depraved sexual instinct which affects the male of all ages, who gives up his mind to impure thoughts and whose sexual necessities are not met. The following (personal) case, one of many, will serve to illustrate the class:

Case XIII.—An old man of sixty inserted a head of wheat-straw, procured from the *paillasse* beneath him, into his urethra. It slipped beyond his reach and traveled on into the bladder, where it formed the nucleus of a large phosphatic calculus, which was afterward removed by the lateral operation. It was not until this nucleus was found that the cause of stone was suspected, and only after being detected did the old man confess his tricks.

Seeds, stones, beads, beans, peas, nails, pins, needles, hair-pins, slate-pencils, portions of glass, wax, cork, and a host of other substances are thus introduced into the meatus, and, slipping beyond the reach of the fingers, are not unfrequently swallowed by the urethra. Broken catheters and bougies, especially in cases of stricture, and instruments left *à demeure*, if not well fastened, may slip past the meatus and travel toward the bladder. Fragments of stone after crushing, or small stones, may also become arrested in the urethra and demand the surgeon's aid. Then, again, stone may form in the prostate, or in the urethra behind a stricture, or upon a nucleus—some small foreign body introduced from without; foreign bodies from dermoid cysts, or passing through fistula in the rectum, may reach the urethra and become arrested there. Long bodies always tend to travel toward the bladder, especially if they are sharp at one end (pins), as such bodies are always introduced blunt-end foremost. Stones and rounded bodies lie in the naturally wider parts of the canal (fossa navicularis, bulbous urethra), or become arrested by stricture.

If foreign bodies are not removed, one of three consequences follows: 1. They travel on into the bladder and form a nucleus for stone there; or, 2. Stone forms around them in the urethra; or, 3. They cause the urethra to inflame, bring on retention of urine, and finally become encysted or ulcerate their way out, leaving behind fistula and ultimately stricture.

Treatment.—If the body be long and soft (catheter, piece of wood), it may be transfixed with a stout needle through the floor of the urethra and the canal pushed back over it, like a glove over a finger, as far as possible, when it may be transfixed again, and so urged forward until it can be seized at the meatus; otherwise, the urethral forceps should be used, having long, slender blades terminating in spoon-shaped ends, and so arranged that at any depth of the urethra the ends may be opened without separating the blades (Fig. 93). The little instrument of Leroy d'Etiolles is often serviceable in removing rounded bodies—or the urethral lithotrite (Fig. 96). Other instruments have been devised for removing foreign bodies, but the forceps will generally prove most useful. In manipulating with any instrument, in fact, as a general rule, if the finger on the outside can detect the foreign body and can get behind it, nothing should divert the surgeon from keeping up pressure at that point to prevent his instrument from pushing the offending substance still deeper into the canal.

If the foreign body lies behind a stricture, the latter must be cut, divulsed, or rapidly dilated (continuous dilatation), to allow the passage of a suitable instrument for extraction.

Pins and needles usually necessitate an opening of the urethra from the outside. Such an opening should never be made through the scrotum, for fear of infiltration. It is preferable to cut through the perinæum, even if the foreign body has to be pushed back in order to be caught. The urethra may be opened by cutting upon the foreign body, or upon the end of a staff in the urethra, pushed up to it. The after-treatment of wounds so made is the same as for incised wounds of the urethra. The incisions should invariably be longitudinal. Dieffenbach[1] removed a pin very adroitly from the membranous urethra, by introducing a finger into the rectum, pushing upon its head until the point had been caused to penetrate the skin, and then seizing and forcibly extracting it.

CHAPTER III.

DISEASES OF THE URETHRA.

Inflammation.—Causes.—Subdivisions: Gonorrhœa; Bastard Gonorrhœa; Urethritis.—Symptoms.—Duration.—Course.—Gleet.—Complications of Urethral Inflammation.—Treatment; Method of performing Injection; Abortive Treatment.—Methodic Treatment of Increasing Stage, including Description of Wrappings; of Stationary Stage, including Chordee; of Decreasing Stage, including Copaibal Erythema.—Gleety Stage; Treatment of Gleet.—The Endoscope.—Rare Sequelæ of Gonorrhœa.

Gonorrhœa — Urethritis.—Of all the diseases encountered in genito-urinary surgery, urethral inflammation is the most common. Furthermore, although a strictly local affection, and exerting no poisonous action upon the blood, it is the most venereal of all venereal diseases, since it is the commonest malady acquired during the copulative act. A most respectable antiquity is given to the disease by the fifteenth chapter of Leviticus, and although it is contended that the discharge known to the Jewish lawgiver was a simple urethritis, and that gonorrhœa (a specific infection) did not appear until later (according to Astruc[2] in the year 1545–'46), yet the disease was evidently a running from the urethra, and discussions about its simple or specific nature belong to theoretical and not to practical text-books. We have to start from the clinical facts that all inflammations of the urethra are characterized by the discharge of pus, or muco-pus, from the meatus, and that the only guide for treatment is the amount of the inflammation, and the quantity and quality of the discharge[3]—an inflammation of given intensity requiring a given treatment, whether it has sprung from specific contagion, or from chemical or mechanical irritation. This point

[1] "Ueber fremde in die männliche Harnröhre eingedrungenen Körper." Casper's Wochenschrift, i., 1843.

[2] "De Morbis Venereis," Paris, 1736.

[3] "Dry gonorrhœa" is an impossibility. The morbid state formerly known by that name is neuralgia of the urethra.

being fairly understood, the study of the disease becomes simplified. Gonorrhœa cannot be separated from urethritis clinically, hence they must find a common description under the same head.

The term gonorrhœa is etymologically inaccurate, indicating, as it does, a flow of semen (*γόνος*); but usage has secured to it a precise signification even among the laity (almost to the exclusion of the old Saxon term *clap*), and any alteration would lead to confusion. Urethritis signifies simply inflammation of the urethra, consequently gonorrhœa is urethritis, but the converse does not hold good; and, although it is sometimes absolutely impossible, in a condition of high urethral inflammation, to pronounce upon its origin with certainty, yet it is better, for practical purposes, to retain the two terms, calling that gonorrhœa which has been derived unmistakably from an individual of the other sex with a gonorrhœa, and reserving the term urethritis for all inflammatory urethral discharges having another origin, and for all cases of doubt. This latter precaution is of the utmost importance to the student and young practitioner. It is better that a hundred of the guilty should escape, than that one innocent person should be accused. Experience proves beyond a doubt that a high condition of urethral inflammation, attended by an abundant discharge, and presenting absolutely no diagnostic features to differentiate it from a gonorrhœa derived from a prostitute with a virulent discharge—that such a urethral inflammation may be acquired by a healthy young lover from his equally healthy mistress, by a young husband from his wife, or may be produced by applying a chemical irritant to the urethra. These cases are indeed rare, but are of undoubted authenticity, and it becomes the surgeon's duty to hesitate long before asserting the infidelity of a man or woman, and thus, perhaps, accusing the innocent, and destroying the harmony of a family. It is proper to state that a healthy man may get a urethritis from a woman who has none (may give himself the gonorrhœa, as Ricord puts it) far more easily than a woman can get a discharge from a healthy man; unless, of course, great mechanical violence be used, as in rape.

Causes of Urethral Inflammation.—Gonorrhœa is a notoriously contagious disease, and it may be acquired, from any person having it, by the mere contact of the discharge with the mucous membrane of the urethra.[1] It is not necessary that the surface should be abraded. Simple contact is enough without any sexual act, as has been abundantly

[1] The only mucous (or other, as far as known) membranes of the body capable of taking on inflammation from the contact of gonorrhœal pus are the urethral, vesical, by extension (gonorrhœal cystitis), the vaginal (the uterine rarely by extension), the conjunctival, and the rectal. Buccal, aural, nasal, and umbilical gonorrhœa have been mentioned, but authors are of accord that the cases cited are not conclusively proved. Gonorrhœa of the rectum has undoubtedly been observed in several instances; one case by Tardieu ("Études médico-légales sur les Attentats à la Pudeur," p. 180) in a prostitute who had practised sodomy; and three cases by Allingham ("Diseases of the Rectum," London, 1871, p. 237), all in prostitutes, "who all confessed the manner in which they got so affected."