

PART I.

DISEASES OF THE GENITO-URINARY ORGANS.

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CHAPTER I.

DISEASES OF THE PENIS.

Anatomy.—Anomalies; Double Penis; Absence of Penis.—Injuries, Fracture.—Cutaneous Affections.—Tumors.—Cancer.—Amputation of Penis.—The Prepuce; Circumcision.—Phimosis; Remote Results of Phimosis.—Paraphimosis.—The Glans Penis; Herpes Progenitalis, Balanitis, and Posthitis, Vegetations, Epithelioma.—The Corpora Caverosa; Inflammation, Calcification, Gummy Tumor, Circumscribed Chronic Inflammation.

THE penis is a genital organ. Its urinary function is purely secondary. It is conformed anatomically to subserve the genital function. In the adult it measures, when at rest, from the root of the scrotum to the meatus urinarius, from two and a half to four inches; when erect, from five to seven inches. It consists essentially of three segments—the two corpora cavernosa, lying together like the barrels of a gun, and the corpus spongiosum—like the ramrod—beneath them—the whole surrounded by integument.

THE CORPORA CAVERNOSA arise on either side from the tuberosities and ascending rami of the ischium. They come together under the symphysis pubis, and continue side by side, forming the main bulk of the penis. They terminate anteriorly in a conical extremity, over which the glans penis (the terminal expansion of the corpus spongiosum) fits like a cap. There is no vascular communication between the tissue of the corpora cavernosa and that of the glans penis, nor with that of any part of the corpus spongiosum.

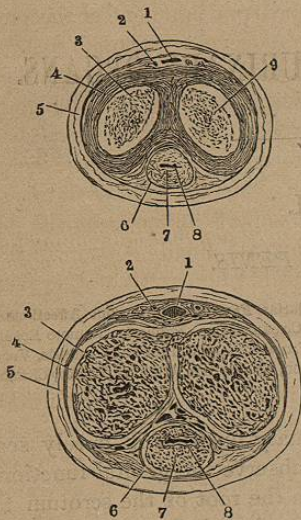
Each corpus cavernosum is surrounded by its own fibrous sheath—tunica albuginea—which, together, are so dense and strong, that they will support the weight of the cadaver without giving way.<sup>1</sup> The

<sup>1</sup> Cruveilhier, "Traité d'Anatomie descriptive," Paris, 1865, vol. ii., part i., p. 386.



sheath is, however, plentifully supplied with elastic fibres, which allow it to accommodate itself to the variable size of the organ. The partition between the corpora cavernosa is perforated by numerous apertures, to insure thorough and symmetrical erection. The tissue proper of the corpora cavernosa is known as spongy, or erectile. Erection takes place when the areolæ of this tissue become distended with blood, as shown in Fig. 1.

THE CORPUS SPONGIOSUM URETHRÆ is also composed of erectile tissue. It surrounds all that portion of the urethra lying in front of the triangular ligament, anteriorly forming the cap over the conical extremity of the united corpora cavernosa—known as glans penis—posteriorly terminating in the bulb, which lies just in front of the triangular ligament in the angle of the converging crura penis.



FIGS. 1, 2.—(Cruveilhier.)  
TRANSVERSE SECTION OF PENIS.—FIG. 1. Flaccid; FIG. 2. In Erection; 1, 2. Dorsal Vein and Artery; 3. Erectile Tissue; 4. Tunica Albuginea; 5. Integument; 6. Tunica Albuginea of Corpus Spongiosum; 7. Erectile Tissue; 8. Urethra.

One important function of the corpus spongiosum is acquired through its bulb—namely, that of assisting in the expulsion of the last drops of urine or semen from the urethra. The prostate, levator ani, and deep urethral muscles—especially the compressor urethræ—contract upon the fluid remaining in the canal after micturition, in that spasmodic effort called by the French the “coup de piston.” This forces the last few drops beyond the bulb of the urethra. Now the middle fibres of the accelerator urinæ—those which surround the bulb and adjacent portions of the corpus cavernosum—contract and forcibly drive the blood, which was contained in the areolæ of the bulb, forward along the corpus spongiosum, forcibly distending that body, and thus bringing the walls of the urethra more closely into contact in a progressive wave. This helps to explain, as

shown by A. Guerin,<sup>1</sup> why the last few drops of urine do not escape promptly, but dribble away in cases of organic stricture of any severity; for, with such a stricture, the areolæ of the erectile tissue become more or less obliterated at the constricted point, and an obstacle is formed to the free passage of the wave of blood forward along the corpus spongiosum.

The three erectile bodies which have been briefly described are surrounded by the sheath proper of the penis—a membrane important in its pathological relations, and sometimes known as Buck’s fascia, from the distinguished surgeon who first accurately described it.<sup>2</sup> This fascia may be said to arise from the linea alba and symphysis pubis by a triangular bundle of fibres known as the suspensory ligament of the penis. The fibres spread out upon the corpora cavernosa, extend over the conical head of these two bodies, and are, at this point, firmly attached to the under surface of the glans penis, which may be removed entire with the fascia. The sheath, after encircling the corpora cavernosa, splits into two layers, to embrace and form a sheath for the corpus spongiosum. The fascia is attached behind along the rami of the pubes, and is identical with the deep layer of the superficial fascia of the perinæum, curving under the transverse muscles, and finally losing itself in the anterior layer of the triangular ligament. The cavity of this fascia is bounded anteriorly by the under surface of the glans penis, and posteriorly by the triangular ligament. Its boundaries have a practical bearing upon the burrowing of infiltrated urine. Urine may escape out of the urethra, and yet be prevented by this fascia from passing the limits above described for an indefinite time, unless Richet<sup>3</sup> is correct in stating that, at the root of the penis above, the fascia cannot be distinguished from that covering the pubes—that it is here loose in character—and that urine may escape at this point out of the sheath into the areolar tissue of the abdominal wall.

The lymphatics and veins of the penis run along the dorsum of the member, and receive in their course branches from the corpus spongiosum, which encircle the penis between the folds of Buck’s fascia. The lymphatics lead mainly to glands lying along and above Poupart’s ligament on either side. The arteries come from the internal pudics.

The connective tissue which attaches the integument of the penis to the fascia is very loose and elastic, and, like that of the eyelids, does not contain fat.

The skin of the penis, except that it tends to become pigmented after puberty, does not differ essentially from ordinary integument. Over the glans penis it folds back upon itself, forming a non-adherent sheath for the glans (the prepuce), evidently intended to preserve the delicate sensibility of this portion of the member.

<sup>1</sup> “Des Rétrécissements du Canal de l’Urètre.” *Mém. de la Soc. de Chir.*, vol. iv., 1857.

<sup>2</sup> *Trans. Am. Med. Ass.*, vol. i., p. 367.

<sup>3</sup> “*Traité d’Anatomie Médico-Chirurgicale*,” Paris, 1873.



THE PREPUCE is composed of two layers, a cutaneous (external), and a more delicate semi-mucous (internal). The point of junction of these two is called the orifice of the prepuce. Between these layers is a very loose and elastic connective tissue, without fat, which allows the two surfaces to be entirely separated from each other, and the prepuce effaced, by drawing back the integument of the penis until the glans is entirely uncovered. The mucous layer of the prepuce is supplied with the glands of Tyson. It is much less elastic than the cutaneous layer.

The prepuce is attached to the lower angle of the meatus urinarius, or orifice of the urethra, by a triangular fold of mucous membrane called the *frænum preputii*—analogous to the *frænum linguæ*.

#### ANOMALIES OF THE PENIS.

Deformities of the penis are constituted by abnormalities in some of its constituent parts. The most common examples will be mentioned in connection with these parts. As anomalies of the penis, two conditions demand especial notice—double penis and absence of the penis. Anomalies in size occur, as when the penis is nine or ten inches long when at rest, or only a couple of inches long when erect; but these variations are very uncommon.

DOUBLE PENIS is excessively rare. It is analogous to double uterus and vagina in the female, but by no means so common. Undoubtedly it is not so uncommon as the records of surgery would seem to imply, for the existence of this deformity is naturally accompanied by an excessive sensitiveness on the part of the patient which leads him to shun observation and comment; and, as the defect is not necessarily accompanied by any symptoms affecting the general health injuriously, the patient does not voluntarily subject himself to the inspection of a physician, and thus keeps himself out of the books. Case I., reported by the authors, exemplifies this fact, and chance alone allows it to be placed on record.

A case of this anomaly is reported by Mr. Ernest Hart<sup>1</sup> (with several plates of the patient in different positions), in the person of a well-formed, healthy man, the victim of a monstrosity by foetal inclusion. Between his thighs there grew a third thigh, terminating in a leg and double foot, all small and deformed. In front of this thigh there was a shrunken, empty scrotum, bordered on either side by a well-developed scrotum, each containing one testicle. The penis was double, each organ being well formed and perfectly developed. They were both in proper position, each measuring four and a half inches when pendant, being larger than normal. The left was the larger in circumference, and appeared to have become so by being used in preference to the other. Both be-

<sup>1</sup> *London Lancet*, January, 1866, p. 71.

came erect at the same time under excitement. The urine or the semen, as the case might be, was discharged simultaneously by both organs.

The following (personal) case is more strictly typical of double penis, since it shows no evidence of so-called foetal inclusion:

CASE I.—In 1873, a stout, healthy-looking man, of forty-two, applied for advice as to what form of truss he should wear for a rupture. A portion of integument some three inches in diameter, cicatricial in aspect, situated in the median line, just below the umbilicus, and not protruding noticeably as he lay on his back, was pointed out by the patient as the seat of rupture. There was distinct prominence of this portion of the abdominal wall in the upright position, increased on effort, by coughing, etc. The difficulty was congenital and caused but slight inconvenience. The general appearance of the deformity suggesting extrophy of the bladder, an attempt was at once made to expose the genitals, which the patient had thus far kept scrupulously covered by his clothing. This movement the patient resisted, insisting that he desired advice about his rupture only, and was unwilling to expose himself further. After overcoming his reluctance, the genital organs were uncovered, revealing two distinct male organs of normal size, and apparently well formed, lying side by side, each attached by its root to the pubic symphysis. Each penis was well developed, the right rather the larger of the two. Their integumental covering was common up to the base of the glans; here each was entirely distinct and perfect as to external appearance, but the meatus of the left glans was impervious. The right meatus was normal, and the patient stated that his urine passed through this opening mostly, some always escaping from a point behind in the perinæum. Here, just where the root of the scrotum should have been attached, was seen, on lifting the double-barreled penis, the orifice of a canal, lined by healthy mucous membrane, and large enough to admit the finger, funnel-shaped, and, in general appearance, recalling the ostium vaginae of a child. What proportion of the urine passed through this orifice the patient could not state, but he was compelled always to let down his trousers and sit, when he made water. On the right side of this orifice was an elongated, rounded prominence, recalling in its outline the *labium majus*. This contained a testicle, normal in shape and sensibility, and but slightly under-sized, surrounded, as was evident from its mobility, by a *tunica vaginalis*. The left testis lay over the tendon of origin of the adductor longus in the left groin. It was not fully developed. There was no prominence on the left side of the perinæum. The patient had sexual desires, erections, and emissions. Both penes became simultaneously erect, the right more vigorously. The sexual propensity seemed rather deficient. There was a feminine breadth about the pelvis. The *mammillæ* were normal. There had never been any periodical phenomenon of the nature of menstruation. The left lower limb was several inches shorter and smaller than the right. This was congenital. Health had always been unusually good. The patient left with an unsolicited promise to return—a promise which he failed to keep. There was great difficulty in getting at any of the facts of the case, on account of the *mauvaise honte* of the patient.

ABSENCE OF THE PENIS.—A case of congenital absence of the penis has been observed by Nélaton.<sup>1</sup> The scrotum was well developed, and contained testicles. The child urinated through the rectum. Another similar case has been reported by Goschler.<sup>2</sup>

<sup>1</sup> *Gaz. des Hôp.*, 28, Jan., 1854.

<sup>2</sup> "Vierteljahrschrift für practische Heilkunde," Prag, part iii., 1857.



## ACCIDENTS TO THE PENIS AS A WHOLE.

**CONTUSIONS.**—The escape of blood under the skin in superficial contusions of the penis is often excessive, on account of the laxity of the connective tissue, and the large size of the superficial veins. Deeper contusions give rise to localized swelling from circumscribed effusion of blood, which fluctuates, increases in size on erection, and may cause the penis to deviate more or less from its normal aspect. Opening into such a collection of fluid is not to be thought of, as it might give rise to suppurative inflammation. If the contusion be severe enough, inflammation of the corpora cavernosa results, ending in suppuration or gangrene. Severe contusions involving the urethra may lead to infiltration of urine, and loss of substance, with urethral fistula.

*Treatment* of contusion consists in combating inflammation, employing cold, evaporating, astringent lotions; later, perhaps, compression, and in giving the absorbents time to remove the effusion.

**WOUNDS.**—The penis is liable to be wounded by accident or design. In the latter case insanity, or the melancholy depression often attending the loss of self-respect produced by masturbation, is apt to be at fault, and to induce the patient to mutilate himself: or, the injury may be inflicted by a woman, jealousy being the motive.

Superficial cuts are unimportant; but wounds extending within the sheaths of the corpora cavernosa may give rise to troublesome, possibly fatal hæmorrhage, while the cicatrices left on healing may distort the penis, and render erection imperfect and painful.

*Treatment.*—Clean the wound. If a large artery is spirting, tie it, but let the oozing points alone. Join the edges as accurately as possible, with points of fine suture not introduced deeper than through the fibrous sheath. Employ moderate pressure in dressing. Erections, which are sure to occur since the local inflammation induces an afflux of blood, always retard healing.

(For injuries involving the urethra, refer to diseases of that canal.)

## FRACTURE OF THE PENIS.

When the fibrous sheaths of the corpora cavernosa are ruptured by sudden forcible flexion of the erect penis, a sort of fracture of the member is produced, with extensive extravasation of blood—sometimes amounting to traumatic aneurism. The late Valentine Mott<sup>1</sup> reported two interesting cases of this accident, where the only treatment employed was rest and cold locally. Both cases recovered, with a useful organ and no deformity.

*Treatment.*—A silver or stout woven, elastic catheter, strong enough to resist lateral compression, is first passed into the bladder to insure

<sup>1</sup> Transactions of the New York Academy of Medicine, vol. i., part i., 1851.

right of way to the urine. Over this the penis is firmly compressed by adhesive straps or collodion, or both, and cold applied locally. Pitha<sup>1</sup> states that, if speedy relief be not afforded, the tension of the blood, effused in great excess, may bring on rupture of the sheath of the penis, or gangrene, demanding amputation.

As a rule, patients recover more or less perfectly. A lumpiness may be left behind at the point of injury (nodes or ganglia of the corpus cavernosum) which makes erection imperfect and painful, and interferes with sexual intercourse. No attempt has yet been made to relieve this latter condition, when following fracture.

The only other form of fracture to which the penis is liable is, rupture of the inflamed corpus spongiosum urethræ.

When this erectile body is inflamed, as it often is in gonorrhœa, a painful curving downward of the penis during erection is the result, and there exists a vulgar superstition that, if this chordee be "broken," the gonorrhœa will get well. A patient breaks his chordee by violently straightening the organ, when it is erect. The result is a free flow of blood from the urethra, and, after a time, inevitably, traumatic stricture.

That rupture of the healthy corpus spongiosum may occur is shown by the following case:

**CASE II.**—A middle-aged Irishman, attempting intercourse while intoxicated, sustained a rupture of the corpus spongiosum urethræ, which led to abscess, urinary fistula, and subsequent traumatic stricture. The patient had no gonorrhœa, stricture, or other lesion of the urethra, or of the corpus spongiosum, before the accident.

## CUTANEOUS AFFECTIONS OF THE PENIS.

The integument of the penis may be the seat of most of the ordinary cutaneous affections, which present no very special peculiarities in this situation. Venereal sores and eruptions will be described in their proper place. Elephantiasis usually involves the scrotum primarily. In phlegmonous erysipelas of the penis, free incisions should be made early, to prevent gangrene and save the organ from becoming denuded. Lymphangitis may complicate a variety of inflammatory lesions. It will be described in connection with its most common causes—chancre and chancroid. The following case illustrates a peculiar and rare affection of the lymphatics:

**CASE III.**—A middle-aged man presented himself with a painless, compressible swelling behind the corona glandis, partially encircling the penis, with one thickened cord-like lymphatic, extending from it along the dorsum of the penis to its root. The condition was chronic, and did not interfere with the function of the organ. Its origin was idiopathic, and unconnected with inflammation.

## TUMORS OF THE PENIS.

Fatty, fibrous, cystic, erectile, and other tumors, are occasionally,

<sup>1</sup> "Krankheiten der männlichen Geschlechtsorgane," Erlangen, 1864. Virchow, Hdbch. d. sp. Path. und Ther., p. 13.



but very rarely, found on the penis. Their removal is a question of judgment involving a recognition of the function of the penis as an intromittent organ, and the possible loss of this function, from the formation of cicatrix.

CANCER of the penis, except epithelioma, described under diseases of the glans penis, is exceedingly rare. The medullary variety is sometimes seen, especially in boys, following injury of the part. It grows rapidly in a lobular form, unequally in the corpora cavernosa. It involves the glans, and sprouts out under the prepuce. The veins of the penis become larger and tortuous. The distention of the common fibrous sheath of the penis, by the rapid growth of the new formation within it, may compress the urethra, and make retention of urine imminent, calling for external perinæal urethrotomy to relieve the bladder, as occurred in the case of a boy under the charge of Dr. Weir, at St. Luke's Hospital, in this city. The pain of this form of cancer is severe. Some of the bulging prominences along the penis are very soft, and give a fallacious impression of fluctuation, which is very marked. Local heat is increased, and, as the disease may develop not long after injury to the part, the question of suppuration of the corpora cavernosa may present itself to the young surgeon. The inguinal glands soon become involved, the patient emaciates rapidly and dies.

*Prognosis* is the worst, and amputation, the only resource, is not to be thought of, unless the growth be very recent, and involve only the fore part of the member. Relapse would even in such cases be almost inevitable.

#### AMPUTATION OF THE PENIS.

In amputating the penis, as much of the organ should be spared as possible. If it is divided too near the root, it will retract behind the symphysis, unless care be taken to prevent it, and render it difficult to control hæmorrhage. Therefore, where the section must be low, a stout ligature may be passed behind the proposed limit of operation, through some part of the sheath of the penis, as a preliminary step, before cutting into the corpora cavernosa.

When the amputation is made near the suspensory ligament, the patient can no longer throw a stream of urine forward, and the habitual use of the catheter may be required to prevent soiling the clothes.

The steps of the operation are as follows: The skin should be incised at a point somewhat lower than it is desired to divide the body of the penis, as the latter shrinks after section. The corpora cavernosa should be severed with one stroke of the knife. The hæmorrhage is free, and many spirting points will require ligature. The arteries are liable to retract into the tissue of the corpora cavernosa, and the forceps must be slender-pointed and grasp well to seize them. Sometimes they cannot be pulled out. Pressure and cold will arrest oozing, but some

persulphate of iron should be at hand to be used if necessary. If there is tissue enough, the urethra should be divided about half an inch in front of the point of proposed section, as the first step of the operation after dividing the skin. When all bleeding has been quieted, the urethra is slit into two equal lateral flaps, and these united by many points of fine suture to the skin, over the corpus spongiosum, on either side. In case there is not enough tissue to spare, the expedient of Mr. Teale<sup>1</sup> may be resorted to, which consists in slitting the under surface of the urethra after amputation, to the extent of about two-thirds of an inch, and uniting the mucous membrane to the skin on each side of the slit by suture. If the urethra is not especially attended to, stricture of a very serious character is sure to follow cicatrization. If the precaution has been omitted at the time of operating, and stricture has resulted, it may be dealt with subsequently by Teale's method.

Galvano-cautery may be employed in amputation of the penis or the *écraseur* of Chassaignac, or Maisonneuve's modification with a stout wire, and the urethra treated by Teale's method. After the *écraseur*, however, sharp bleeding will sometimes come on in a few hours. As a rule, each of these latter methods is comparatively bloodless, but after any operation there may be recurrent hæmorrhage shortly, accompanied by a tendency to erection. Properly-applied pressure will arrest it.

#### THE PREPUCE.

DEFORMITIES.—Practically, the deformities of the foreskin (phimosis and atresia of the orifice excepted) are unimportant. The prepuce is sometimes bifid, enlarged into a pouch, redundant, projecting half an inch or more beyond the apex of the glans, or only rudimentary from arrest of development. Between the two latter limits it may be of any length, covering more or less of the glans. When the prepuce is deficient, the epithelium of the uncovered glans penis becomes hard and tough, more nearly resembling ordinary cuticle. Under these circumstances the sensibility of the part is diminished, but, at the same time, it is rendered less liable to become excoriated or to take on inflammation. Hence, absence of the prepuce is not to be regretted, and the operation for its restoral, postheoplasty, need not be touched upon. Dieffenbach performed it once on account of neuralgia of the glans penis.

Excessive length of the prepuce may demand operative interference. Moderate length alone, however, can hardly be said to constitute a defect, and may be left unmolested unless complicated by induration, thickening, or a contracted preputial orifice (phimosis), or, unless it becomes troublesome, by getting constantly inflamed, or occasions and keeps up balanitis. Great length of the prepuce is sometimes the result of constant traction, as in children with stone.

<sup>1</sup> *Medical Times and Gazette*, vol. xix., p. 354.



## OPERATIONS ON THE PREPUCE.

**CIRCUMCISION.**—This operation consists in cutting off a portion of the prepuce, including its orifice. According to the chronologists of the Bible, circumcision was instituted as a religious rite by Abraham in the year of the world 2059—nineteen hundred and forty-one years before Christ. Several of the Eastern nations still practise it as a hygienic measure. The chosen people, however, preserve the custom as a religious ceremony, performing it on the eighth day.

Perhaps no operation in surgery has been performed after so many different methods as this simple one of amputation of the prepuce. The indication is to remove the orifice of the prepuce and all redundant tissue and to insure looseness of what is left. This is best accomplished as follows:

If phimosis exists, first insert a well-oiled probe into the *cul-de-sac* of the prepuce, and with it sweep the whole surface of the glans to detect adhesions and break them up, if they are not too firm. Next, seize the orifice of the prepuce at opposite points of its circumference (or at the end of the raphe, if there is atresia) with the fingers, if it is long enough; otherwise with sharp-toothed forceps, drawing the whole forward until the mucous layer is put well upon the stretch. Now grasp the prepuce firmly, just in front of the apex of the glans penis, with a pair of long, narrow-bladed forceps (Fig. 3). Make sure, by moving the glans from side to side, that its apex is not caught by the forceps, and cut away with scissors, curved on the flat, all that portion of the prepuce lying in front of the instrument. If a knife is used, transfix the flap in front of the forceps and cut both ways from the raw edge out.

In performing this operation, it is important to seize the orifice of the prepuce. The young practitioner, if not forewarned on this point, will invariably catch the prepuce over the glans in his fingers and pull the loose skin forward, sliding it on itself, until he thinks he has obtained enough redundant tissue to cut off, and will then apply his forceps according to rule, and cut. He will be surprised, however, on removing the forceps, to find the preputial orifice intact, with a breadth of perhaps a quarter of an inch of the cuticular layer still attached to it, and to discover that he has removed from the penis a belt of skin behind this point. If the preputial orifice itself be seized, there is no fear of too great traction, for the mucous membrane is attached behind the corona glandis, and is, moreover, less elastic than the cutaneous layer. If strong adhesions exist between the prepuce and the glans, it may be necessary, in order to remove enough



FIG. 3.—Ricord's Forceps.

tissue, to make traction from a point a little outside of the orifice of the prepuce. In such cases it is well to mark beforehand, with ink or iodine, the limit of skin which it is proposed to remove, and, placing the forceps just behind this mark, to cut away what lies in front of it.

After the redundant tissue has been removed, what is left of the mucous layer of the prepuce will still encircle the glans, the skin of the penis retracting, by its elasticity, behind the corona. In the adult this mucous layer should be cut down to the corona along the dorsum of the glans. In infants it is as well to tear it to the same point. If adhesions exist, as they often do in children, the mucous layer may be readily peeled off on either side with the thumb-nail. The knife will rarely be required.

The square edges of the mucous membrane are now to be trimmed off slightly with scissors, and pressure applied until the bleeding has ceased. The hæmorrhage is usually unimportant, except from the artery of the frænum if severed. This may be arrested by torsion or ligature.

A most important point, not generally mentioned in descriptions of this operation, is the necessity of thoroughly relieving all tightness, wherever situated. Removing all the prepuce is not essential, but whatever is left must be loose: otherwise, after a slow recovery from his operation, the patient still finds himself with a tight, possibly still phimosed, prepuce. The cause of this failure of the operation is the mistaken idea that the stricture lies solely in the mucous membrane, and that the skin, being elastic, will stretch. Theoretically true, this conclusion is practically inaccurate. The raw edge of the cuticle may slip quite readily over the glans penis after operation, but, if it be in the least degree snug, it exposes the patient to two dangers, namely:

1. Erections stretch the small circle, pull the edges asunder, put the sutures on the stretch, and greatly interfere with quick union. This need never happen. If the operation has been properly performed, it is entirely unimportant how many erections occur, healing goes on just as rapidly, for the adjustment of the edges of the wound is not interfered with.

2. The cut cuticular surface contracts on healing, and, if a little prepuce has been purposely left, at the patient's request, the new orifice is perhaps so tight as to be unable to pass over the corona during erection.

Both of these inconveniences are readily obviated by making two incisions (perhaps a quarter of an inch long in the adult), one along the raphe, and the other along the dorsum, of the penis, and slightly rounding off the four square corners. This gives ample room in all cases. In babies this modification of the operation is not called for.

The wound in the infant is dressed by simply laying the raw surfaces in contact, and retaining them there by the application of a square piece of old linen, smeared with cold cream, with a hole in its centre just large enough to allow the glans penis to pass through. This is to be