

very large, the reaction is mostly slight, and recovery speedily follows in almost all cases, while lithotripsy has to battle especially with the narrowness of the youthful urethra, on account of which also chloroform has to be administered at every sitting, and the consecutive pains at the passage of the fragments are very severe.

C.—MALE GENITALS.

I.—Penis.

(1.) MALFORMATIONS.—(a.) *Congenital Phimosis* (from φίμοσ, I bind tight). By this is understood a congenital lengthening, and at the same time tightening of the prepuce to such a degree that it is impossible to retract it over the glans penis. In little boys, a certain degree of this condition is to some extent physiological, and very rarely only can the foreskin be pulled back entirely so as completely to expose the glans; still, as a rule, it can be retracted so far as to allow the mouth of the urethra and adjacent parts to be inspected.

If it is impossible in any manner to retract the foreskin sufficiently to expose the meatus, then the condition is called congenital phimosis. Usually the effects of this condition are trifling, for the orifice in the foreskin is generally sufficiently open to allow the urine to flow off in a stream. This superfluity of the prepuce decreases with age, the apex of the glans at length becomes visible, and with the appearance of manhood the entire condition is relieved.

A marked swelling of the prepuce sometimes originates, partly from uncleanness, partly from external injury, and partly as a result of balanitis, which is liable to so close the opening that urine is actually unable to pass through the tumid orifice. The foreskin becomes expanded like a bladder, and discolored; the child is very restless, and with cries of pain presses out a few drops only of urine through the almost-totally-closed opening. Gangrene of the prepuce has even been seen to result from this condition.

The firm adhesions occasionally met with between the inner lamella of the prepuce and glans penis are not congenital, but the effects of former ulcerative processes in these parts.

Treatment.—Mild grades of cedema of the superabundant foreskin may be relieved by cleanliness and the application of a little oil. In more marked cases, with very small opening, the unnecessary tip of the integument may be removed in a very simple manner with the scissors. The external lamella of the prepuce then retracts more than the tensely-stretched internal one, and a short longitudinal incision should therefore be made, splitting it toward the base of the glans. The lips of the wound will soon arrange themselves pretty closely

to each other, or they may be held in juxtaposition by a few serre fines. The hæmorrhage and consecutive cedema are but slight, and the cure is complete in a few days.

(β.) *Congenital Paraphimosis*.—It occurs with and without hypospadias, and is the result of a true arrest of development. The glans, from the earliest period of embryonic life, are not covered by foreskin, are imperforate, and the future meatus urinarius is only indicated by a white spot. Very gradually a fold of integument, the future prepuce, forms behind the corona glandis, rapidly grows forward, and soon covers the whole glans. The urethra in the mean time has become developed. An arrest of this growth, and the coalescence of this rudimentary prepuce with the glans, produce the condition known as paraphimosis congenita, or, strictly speaking, a defectus præputii congenitus. It is frequently combined with hypospadias, and the frænulum, in particular, is often so shortened that, during erection, the meatus is pulled downward. Von Ammon has made the remarkable observation that congenital defect of the foreskin not unfrequently occurs in Hebrew boys. It would therefore seem that an artificially-produced defect of form may be inheritable. An analogue of this fact is found in the well-known one that tailless pups are much more frequently born in the races of dogs whose tails it is customary to cut off, than in other races which are not mutilated by this cruel custom.

No therapeutic measures are necessary in this defect of the penis; but, when the frænulum is too short, and during erections drags upon the glans so as to be a source of pain, it may become necessary to divide it.

(γ.) *Congenital Closure of the Meatus (Atresia Urethrae)*.—Either the orifice of the urethra only is agglutinated, or closed up by a membrane, or a larger portion of the urethra is impervious. In the first, the urethra, on micturition, is seen to expand up to the point of closure, and the defect may easily be remedied by a slight longitudinal puncture with the exploring trocar; and in the second case, a very rare condition, and almost always complicated with hypo, or epispadias, the operation is very difficult, and ultimately the bladder will have to be punctured if it is not possible to discover the urethra.

(δ.) *Anomalous Openings of the Urethra, Hypospadias and Epispadias*.—In *hypospadias* the urethra is not closed on its under surface to the tip of the penis, but presents an open trough, so that the mouth of the urethra is not found at the point, but on the under surface of the penis. In the milder grades of hypospadias, where the opening is in the course of the penis, the individuals suffer no other inconvenience than that the stream of urine does not flow directly forward but

downward. Boys learn to correct this by holding the penis upward. In the cases of extreme degree of this defect, not only the whole urethra, but also the scrotum and even the perinæum, is fissured, and the bladder terminates directly into this chasm. This condition is liable to be mistaken for hermaphroditism, especially when the testes have remained in the abdominal cavity, as is generally the case. The sex in these cases can only be decided with certainty in later years, when the sexual characteristics of the individual develop, such as masculine voice, masculine form of body, and growth of beard.

Hypospadias, according to its genetic character, is a true arrest of development; for, in this condition, the urethra does not exist in the penis, but is represented in a rudimentary condition as a furrow terminating at various distances from the widely-separated testicles.

The attempts to establish a normal urethra, and to close the anomalous orifice by a surgical operation, are rarely successful, on account of the urine with its corrosive qualities flowing over the fresh wound.

By *epispadia* is understood a splitting of the urethra on its upper surface, so that its proper orifice is on the dorsum of the penis. The fissure is either limited to the glans, or extends throughout the entire length of the penis, and ectopia of the bladder may be looked upon as the highest degree of this malformation, a detailed description of which has already been given on page 445. It is a much rarer condition than hypospadias. When the opening of the urethra is situated close to the glans, the child has normal control of the bladder, and learns to hold the penis, during the act of micturition, in such a position as not to wet its clothing. But when the aperture is near the root of the penis, then incontinence usually exists, and all the lamentable effects are superadded. Those persons only, who have the aperture in the urethra situated so far back that, during the emission of semen, none enters the vagina, can be regarded as devoid of procreative abilities.

(2.) **BALANITIS, INFLAMMATION OF THE PREPUCE** (from *βάλανος*, glans).—In large boys the smegma præputii occasionally accumulates in large quantities, becomes hard, and undergoes chemical decomposition, and then causes inflammation of the glans and prepuce. This may also be produced by external injuries and constant playing with the foreskin. It may also occur in those who masturbate, and in patients suffering from worms.

The foreskin is then seen to be swollen, its orifice agglutinated, and the most intense pains are induced when an attempt is made to retract it. The glans penis appears reddened, covered with pus, and, when it is completely exposed, large masses of a cheesy and fetid matter fall out from the fold of the prepuce. The cause of this inflam-

matory disease is usually removed with these lumps, and in a few days it disappears. The cure is accelerated by lotions and compresses dipped in lead-water.

If the prepuce, on account of too severe œdematous swelling, cannot be retracted, the chief cause of this swelling of the smegma cannot, of course, be removed. The result will be an indefinite prolongation of the inflammation, the formation of abscesses, and even perforation of the foreskin. I once treated a boy for a very severe balanitis, whose prepuce could not be retracted by any means. Injections of oil and warm fomentations, which in other cases caused the œdema to disappear, proved ineffectual in this case. On the third day a bluish-black spot appeared in the vicinity of the frænum, indicating circumscribed gangrene. At this time a bright spot became visible through this gangrenous membrane, which, on closer examination, was cut down upon and found to be a knot of a thread, which, upon being pulled out, proved to be quite long. The inflammation and gangrenous disease were arrested by its removal, and the balanitis disappeared. This boy, after retracting the prepuce, had tied a thread around the glans, which soon swelled up, and then he was unable to untie it. The fear of punishment prevented him from confessing his unfortunate act, and he had therefore to wait until the thread made its way out in the manner described. But, as the gangrene did not involve a portion larger than the size of a pea, the effects were of little moment.

The treatment of simple balanitis is limited to the removal of the smegma, subsequent cleanliness, and astringent lotions. There is no danger of union occurring between the prepuce and glans penis.

(3.) **ACQUIRED PARAPHIMOSIS.**—On account of the long, narrow prepuce, a paraphimosis originates in children much more frequently than in adults. Boys find a pleasure in pulling and retracting it so as to expose the whole glans. The narrow aperture of the foreskin, gradually and painlessly dilated by the globular glans, now contracts behind the corona glandis, and it requires more adroitness to return the prepuce in front of the glans than was necessary to pull it back. The alarmed child usually seeks to hide its disaster, the constriction in the mean time causes a marked œdema and deformity of the penis, and the parents, whose attention is finally attracted to it, are extremely frightened by this strange form of the organ. If left to itself, the œdema of the glans will increase for several days, and the penis will become bluish and deformed. Spontaneous, gradual diminution in size will, however, take place in time, for the preputial orifice becomes dilated, and the glans ultimately slips spontaneously behind the foreskin. I have never yet seen gangrene of the glans result from simple constriction of the preputial border. Once, however, from

constriction by a thread, as has been related. The slight amount of danger that attends the first form is, in fact, due to the distensibility of the foreskin itself.

Treatment.—A more gratifying treatment than that of paraphimosis can hardly be found. The extremely-alarmed mother brings what she considers a maimed child to the physician, and, after a few minutes, leaves him beaming with joy, for the glans penis, by the successful reduction of the prepuce, has been restored to its normal form.

The entire operation of the reduction simply consists in this: the cedematous prepuce behind the glans is grasped between the two index and middle fingers, while at the same time the glans is pressed backward by both thumbs; a traction of the prepuce forward and a movement of the glans backward are thus produced, and the result of this manipulation is a gliding of the foreskin over the corona glandis, and the latter, in a short time thereafter, regains its normal shape and color. In neglected cases, the glans may first be reduced in size by allowing a stream of cold water to flow over the organ, and the unavoidable pains attending the reduction are also thereby rendered less severe.

I have met with many cases of paraphimosis, but so far have been able to reduce every one of them, and therefore believe that those children's physicians, who advise the use of compresses of lead-water and various astringents until a reduction takes place, are not acquainted with the above procedure.

No after-treatment is necessary, for the part, once reduced to its proper position, soon regains its normal form. There is also no danger of any relapses, for the child who has thus been so terribly frightened has never any more desire to see his glans penis exposed.

(4.) **ONANISM** (*Masturbatio*).—This practice, though met with in girls, is far more common among boys, and its effects are less significant in the former than in the latter. The term, in boys, is applied to a habit of rubbing or kneading the penis with the naked hand. By this means it is brought into a state of erection, and finally an ejaculation of semen takes place if the boy be of sufficient age. Girls titillate themselves, either with the finger or some similarly-shaped object, in the vagina; but, as pain, redness, and increased secretion of the vaginal mucus, are very apt to result, the habit is often thereby promptly arrested in the girl.

In boys the case is altogether different. They derive such intense delight from this practice that, notwithstanding the severest punishment, and their own best intentions, they are unable to desist from these unfortunate manipulations. They thereby become visibly ema-

ciated and anæmic, and remain backward in their bodily and particularly so in their mental development; the integument of the lower eyelids turns to a brownish or bluish color; they have an apathetic expression of the countenance and flaccid muscles. They become indifferent to amusements which they once enjoyed, and withdraw from all society, preferring to be alone, in order to indulge their passion. The gait becomes unsteady and cumbersome, and the knees fall inward. The emaciation is most strikingly seen on the lower extremities and lumbar region, while the penis increases disproportionately in length and thickness. The prepuce becomes shortened, and is as readily pushed backward as in the adult; the slightest irritation of the penis suffices to induce an erection. The effects of this practice upon health are more or less serious, depending upon circumstances. *Tabes dorsalis* and paralysis of the lower extremities are occasional though rare effects of this practice.

Children who are the victims of this practice, either from symptoms or instruction, are induced to exert themselves to their utmost to abandon the vice. The success of their effort very much depends upon the age at which they have contracted the habit. The later they have acquired it, and consequently the nearer they are to manhood, the less severe the effects observed from it. Boys over ten years of age, by continual masturbation, finally bring about an ejaculation of a slimy and probably prostatic fluid; but, whether this contains spermatic filaments, has not yet been ascertained, so far as I know. The youngest child, so far as I have information, in whom masturbation has been observed, was a girl eleven months old. According to *Krafft's* description, she alternately pushed both her little hands into the vulva with increasing violence and rapidity; she drew up her lower extremities against the body, grinned, and uttered a loud cry. This report is unique, and it may be questioned whether the child had not an eruption or a foreign body in the vagina, which gave rise to the acts, as those of mere scratching.

The majority of boys who masturbate suffer from the above-mentioned effects, but many retain a blooming appearance, and thrive both bodily and mentally. House physicians of institutions which have large numbers of boys assure me that the majority of confirmed masturbators suffer no bodily detriment from it; and many robust men, with great procreative powers, who consult me for other indispositions, confess that they masturbated for years during their youth.

Causes.—The most common cause is the imitative instinct of the boys. A masturbator shows his curious performance upon his own, or perhaps upon the penis of an inexperienced boy, and from that hour the latter becomes addicted to this vice. Onanism, therefore,

occurs much more frequently in boys who have been brought up in an institution than in those that remain in their own families.

Every thing that causes erections promotes onanism. Among these causes may be enumerated heavy feather-beds, too nutritious meat-diet, alcoholic drinks, obscene pictures and stories. It may also be directly induced by itching eruptions on the penis, accumulation of smegma præputii, and by oxyuris vermicularis, which may crawl out of the rectum, and into the vagina, or under the foreskin.

Treatment.—According to the statements of an experienced physician to an institute, nothing can be done with medicines for onanism. All that can be done is to render the practice of the evil as difficult as possible by exercising a strict surveillance. For this purpose guards should be kept constantly in the sleeping-rooms to watch and to punish upon detection. The mattresses should be hard; the coverings ought not to be feather-beds, but blankets of wool or cotton, through which the contours of the body are more easily perceived. The children should be punished very severely, yet the cause must be kept secret from the rest. It is of the greatest importance that as few boys as possible know of this vice, and, for that reason, the speedy dismissal of the masturbator is the best remedy against its spreading. The utmost care should be taken to eradicate the causes mentioned above. It is not politic to examine often and minutely the penis of boys who are suspected, but not proven guilty, for the attention of the innocent might thus be attracted to it, and they thereby become addicted to it. Cold affusions and baths are very valuable remedies for the effects of onanism, such as emaciation and imperfect development. Under no circumstances should iodine, or mineral waters containing iodine, be employed for the obesity which sometimes appears in these children, and on account of which they acquire an extremely comical appearance. Iodine given under these circumstances is liable to induce emaciation and tuberculosis.

The threatenings which are resorted to by some teachers and guardians are, on the whole, very improper; the health is infallibly undermined by them, and death soon follows. They certainly often induce the boys to stop their pernicious practices; but they relapse into a state of deep melancholy, which follows them up to manhood. Proper bodily chastisement serves just as good a purpose, and this sad mental condition is totally avoided.

II.—Testes.

(1.) **CRYPTORCHIDIA** (from κρυπτός, *concealed*, and ὄρχις, *testicle*).—In the ninth month of fetal life, the testicles pass out of the abdomen and descend into the scrotum, and a boy at full term comes into

the world with both glands in the scrotum. Seven-months children are generally delivered with empty scrotums, the testes not having yet descended. One or the other testis—seldom both—is sometimes absent from the scrotum even in children at full term. They remain some time in the abdomen, or in the canal before descending. About ten per cent. of all boys present some of the forms of this irregularity. In the great majority of these cases the testicle descends without producing any symptoms during the first few weeks of life, so that older children are but very rarely met with who have but one testis in the scrotum, and still more rarely with none. These persons are called monorchides, testicondi, cryptorchides. The last is the most appropriate denomination, for they certainly possess not one but two testicles, which, however, cannot be found in their proper places. If an opportunity occurs to make an autopsy upon a cryptorchis, the retained testis will not be found in its original anatomical place, in the lumbar region, in front and below the kidney, but usually at the entrance of the canalis vaginalis, or within it, or in front of it in the lumbar region, where it may also be detected during life, as a hard elliptical tumor, painful when strongly pressed.

Nature occasionally completes the descent at puberty—descensus testiculi scrotinus—a process unattended by any symptoms, and totally unobserved. The testicle, however, never descends quite to the bottom of the scrotum, for the spermatic cord has been shortened and prevents it. In other cases a violent bearing-down pain is said to occur, and it is even affirmed that persons have died from it. The mechanical cause of death, so far as I am aware, has not been very clearly elucidated. It is, perhaps, caused by gangrene of the constricted testis.

According to *Von Ammon*, the testicle may also make a false passage for itself, and appear in the groin, where it may be mistaken for a crural hernia, or it goes to the perinæum. No other unhappy results of cryptorchia occur; impotence, in particular, is not caused by it.

This malformation cannot be remedied by any aid of art. There is no remedy that will extricate the testicle that has remained in the abdominal cavity, and nothing but injury will be done by any attempt at accelerating its descent from the canal by the aid of expulsive trusses. Compressive means are not advisable, even when a knuckle of intestine escapes from the canal at the same time with the testicle. The best thing to do in this case is, to wait till the testis has entered the scrotum, then to reposit the hernia, and retain it by a good truss.

(2.) **HYDROCELE.**—A serous double sac, the tunica vaginalis propria, envelops the testis and epididymis, and in the physiological state

contains but a few drops of serum, sufficient to lubricate the serous surfaces. In hydrocele, an augmentation of this serum distends the sac; its outward surface is nowhere in contact with the inner, and the scrotum has undergone a visible enlargement. We designate this condition by the name of hydrocele.

In young children, hydrocele occurs extremely often; usually only one side is affected. In most instances it is indebted for its origin to an imperfect closure of the canalis vaginalis, after the testicle has descended to the scrotum. This permits the secretion of the whole peritonæum to descend into the scrotal pouch of this membrane, which becomes distended and produces a hydrocele. It is not congenital in the strictest sense of the term, for it originates a few weeks or months after birth. But the predisposition to it, the open vaginal canal, is congenital, and the same may therefore be said of the hydrocele itself. The following four kinds are distinguished:

(1.) Hydrocele canalis vaginalis testiculi aperta (Pl. III., Fig. 11). This form of hydrocele is rarely seen well defined. It appears as an oblong tumor, extending from the base of the canal downward to beneath the testicle, which testicle cannot be felt at all, or but indistinctly; the spermatic cord, on account of serous infiltration, is distended to the thickness of a common lead-pencil. The characteristic feature about this form is, that the tumor becomes markedly more tense and larger at the moment the abdominal viscera are crowded downward by the act of inspiration, and smaller and softer again with the expiration. The same happens when the scrotum is raised up, by which its contents flow back into the peritoneal cavity. Sometimes this can only be accomplished by the aid of pressure, especially when the canal is narrow. This condition is sometimes liable to be mistaken for an external inguinal hernia. The form is the same, and the contents likewise reducible. Dropsy of the scrotum, however, is markedly translucent, flat on percussion, while a hernia always affords a hollow sound, and the testes cannot be isolated in hydrocele as in a hernia. Indeed, the manner in which the tumor disappears suffices for the experienced diagnostician to distinguish the two conditions with certainty. In hernia, the gut retreats suddenly with a gurgling noise, while in hydrocele the tumor decreases slowly and steadily, not by fits and starts.

(2.) Hydrocele fundi canalis vaginalis testicula clausa (Pl. III., Fig. 12). This is by far the most frequent form. Generally it is not congenital, but makes its appearance a few weeks after birth. The tumor is round, transparent, and cannot be diminished by pressure. The testicle is situated above and behind, and can be felt but imperfectly. The spermatic cord is perfectly normal. This hydrocele is often bi-

lateral, and then, owing to the uniform enlargement of both scrotal sacs, is not so readily observed by the relatives as when one side only is affected.

(3.) Hydrocele colli canalis vaginalis aperta (Pl. III., Fig. 13). Here the spermatic cord is found filled with water, and dilated from its commencement in the abdominal cavity, down half-way, more or less, into the scrotal sac, while, in the depth of the scrotum, a perfectly-normal testis is distinctly felt. The tunica vaginalis surrounds the testicle completely, and is dropsically distended in that portion above the testicle only. Pressure does not reduce the size of the tumor; the serum may be forced back into the peritoneal cavity, but the spermatic cord, on account of the hypertrophy of the tunica vaginalis, never becomes as thin as the one on the sound side. Herniæ may readily become superadded to this, and to the form described in sub. 1, as the vaginal canal remains open. It is sometimes not an easy matter to distinguish this condition from hernia. The disappearance of the tumor, whether slowly or suddenly with a gurgling sound, is the cardinal point in the diagnosis of hernia intestinalis. As this form is very rare, however, we are not often likely to meet with the difficulty attending its diagnosis.

(4.) Hydrocele colli canalis vaginalis clausa (Pl. III., Fig. 14). Here the spermatic cord, at its point of exit from the inguinal ring, is of a normal thickness, and continues in this manner for a short distance, then suddenly becomes distended to an oblong cyst, which terminates as abruptly below; the testis, as in the preceding form, is of a normal size and consistence. These conditions are best recognized by first ascertaining the locality of both testes, comparing them with each other, and then by pulling lightly the testis on the diseased side; by this the examination of the spermatic cord is much facilitated. This form occurs tolerably often; it is usually, however, monolateral. It may, indeed, be displaced, as a sound spermatic cord occasionally is, and cannot be felt. As a rule, however, pressure does not diminish the tumor of this condition, for the vaginal canal is closed.

These comprise the various forms of hydrocele in children. The second and the fourth forms are the most common, while the first and the third are rarely observed.

The contents of these hydroceles, if they have not yet been subjected to any active treatment, are thin, pellucid, light-yellow serum, having the chemical composition of the serum of the blood diluted with water. If it has often already been punctured, or a seton been drawn through it, or irritating ointments rubbed in upon it, the fluid that then escapes on puncturing it is of a milky turbidness, and exhibits a large number of cells.

The spontaneous course of all the forms is, although tardy, almost invariably favorable. A hernia prolapsed through the unclosed inguinal canal is an unfavorable complication, as it is thereby prevented from closing, and the absorption of the hydrocele is retarded. In almost all the other cases spontaneous absorption of the effused fluid takes place in the course of time, although often not till after many months. A thickening of the tunica vaginalis propria only remains behind. Absorption occurs even in the rare cases of hydrocele which communicate with the peritoneal cavity; the inguinal ring generally becomes closed when the lower extremities are more freely exercised.

Treatment.—Since almost all hydroceles, in children who have not yet passed beyond the first year of life, get well spontaneously, it is only a question of promoting this cure by Nature, with appropriate means; those most generally regarded as such are dry warmth, aromatic fumigations, astringent fomentations of ammonia and vinegar, wine, diluted tincture of iodine, etc., and finally compressing the tumor by adhesive plaster or collodium. The congenital open hydroceles heal quickest, when their contents are forced back into the peritoneal cavity and retained there by a truss. The simplest and surest remedy, after all, is acupuncture. This may be performed with any plain sewing-needle. The scrotum is made tense over the tumor with two fingers, and then it is punctured several times in succession. A drop of the serous fluid follows each puncture, but, while the external openings in the skin instantly close again, the perforations in the tunica albuginea remain open much longer, and the serum now escapes into the other textures, producing an oedema of the scrotum which, after a few days, is spontaneously absorbed; the external and internal lamellæ of the tunica vaginalis have in the mean time become so firmly consolidated that no future effusion can occur. This little operation may subsequently be repeated without any harm, if the first trial be not entirely successful.

Hydrocele in older children, and that of the spermatic cord, disappear also without any surgical interference, by the simple use of iodine locally.

D.—FEMALE GENITALS.

(1.) MALFORMATIONS.—Malformations of the female sexual organs, in general, are rarer than those of the male, and with few exceptions are only discovered at the time of puberty, for the symptoms which they occasion first appear with pubescence.

In order to thoroughly comprehend these malformations, it is necessary to learn from embryology that the uterus, Fallopian tubes, and vagina, are developed in such a manner, from the canals of Müller,

that the lower part of the latter is converted into the canalis genitalis, and that a transverse indentation then follows, by which it is divided into two portions, the uterus and the vagina. For this reason all these malformations may be arranged, according to *Veit*, in two classes: the first originates through a defective development of one or both canals of Müller; the second through an abnormal union of the two canals in all other respects perfectly developed.

First class: (a.) The canals of Müller have been entirely arrested in their development, and therefore neither uterus nor vagina exists. The external genitals terminate in a short *cul-de-sac*. (b.) The vagina is present, of a normal length, but the uterus is absent, or it is only rudimentarily developed. (c.) Vagina and neck are of normal size, but the body of the uterus, owing to the defective coalescence of the commencing portions of the canals of Müller, is divided—uterus bicornis—atrophic, and terminates in two atrophic oviducts. (d.) Only one of the canals of Müller is deformed, or totally absent, by which the uterus unicornis originates. The corresponding ovary in this case is mostly normally formed; on the whole, however, the ovaries in deformity of the uterus are generally also defective.

None of these malformations give rise to any symptoms in children, and, as they produce no external alterations of form, remain also undiscovered. But, with the appearance of the menses, various disturbances come on, and a menstruatio vicaria becomes established in some other part of the body.

Second class: (a.) The uterus is well developed, but its cornua are divided—uterus bicornis. (b.) The division runs through the whole organ, two vaginal portions project into the single or also double vagina, in which case even two hymens may exist. (c.) Externally no alteration of form whatever, or only a superficial groove, can be detected on the uterus, but its cavity is divided by a central septum into two perpendicular, adjacent compartments, uterus bilocularis.

Even these malformations have no unpleasant influence upon the development of the child, and are almost always only accidentally seen in autopsies. A divided vagina and double hymen, however, will not escape detection.

The conditions described as malformations of the external genitals usually are not really congenital, but form in the course of years from originally normal genitals. This is especially true of the enlarged clitoris, and the elongated labia majora, the so-called "Hottentot's apron." A partial closure of the external labia occurs besides, in small girls, who have suffered from severe deep diphtheritic ulcerations of those parts, and were not treated with a proper amount of cleanliness and care.