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Reprinted from ANNALS OF GYNÆCOLOGY AND
PÆDIATRY, March, 1891.

CLINICAL LECTURE.

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(A Clinical Lecture Delivered at the Polyclinic Hospital.)

CIRCUMCISION is interesting from the fact that it is one of the earliest, if not the earliest surgical operation of which we have any historical mention. According to Biblical history, some two thousand years before the Christian era, Abraham was commanded by God to perform this operation, which was to be a distinctive mark of the chosen people of God, and from that time until the present day this operation has been continuously performed by the Jewish race as a religious rite.

Whether the operation originated with Abraham, or whether he only copied it from some of the then existing nations, is a disputed question. Writers who have investigated the subject are not uniform in their opinion. Those who believe that it did not originate with Abraham point out the fact that he did not perform it upon himself until he had reached the age of 98 years, whereas if it had been a custom of the people among whom he lived, he certainly would have done it at a much earlier period of his life. This, however, is not of much significance, and may be answered by the circumstance that it is admitted, even by those who advocate

the operation, to be of a more ancient date than the time of Abraham, that the Egyptians did not regard it as an obligatory operation. It was restricted to certain classes—the wise men, the priests, the astronomers and a few others. Again, its very wide geographical distribution is argued in favor of the operation not being first done by Abraham, as it is found to have been practised in very nearly all parts of the world. Thus Columbus found that the inhabitants of the West Indies performed this operation. The natives of the South Sea Islands also were in the habit of performing the rite. It may be traced in an unbroken line from China to the Cape of Good Hope. At first it would seem that such an almost universal custom of practising the operation of circumcision could not be peculiar to the Hebrew race, or have originated with them, especially when we know that this people was a very exclusive nation, and kept much to themselves; but, on the other hand, it must not be forgotten that the wanderings of the lost ten tribes may account for the wide spread of the practice, as it is more than probable they carried with them all the customs



of their people, among which was undoubtedly that of circumcision, and the circumstance that many historians are of the opinion that the wanderings of these tribes took them over the greater part of the world. There is one circumstance which, if it is true, would be a most positive one in favor of the operation being of a more ancient date than the time of Abraham, and that is a description of the rite on the obelisks of the ancient Egyptians, who lived long before Abraham was born. That such descriptions do exist I find are claimed by a few writers; but, on the other hand, this is very strongly denied by others, and where there seems to be so much doubt, and where there is comparatively so much in favor of the operation being original with Abraham, I have in my mind concluded that those who believe the operation to be one which was first performed by Abraham are in the right. Indeed, I think it much more probable that the operation was taught to the Egyptians by Moses; and, again, the first historian who denies the originality of the operation to the Jews was Herodotus, who did not write his work until some nine centuries after the death of Moses.

In connection with this operation of circumcision of the male, it is an interesting fact which has been observed by travellers, that in some parts of Africa, among some of the tribes of this country, they practise an analogous operation on the female children, which consists, with some tribes, in cutting off a small portion of the clitoris, while with others it is an excision of the labia minora; and, again, the operation of sewing together the labia minora, leaving a

small opening for the passage of the urine, which is permitted to remain thus sewed until the girl is married. In fact, the mutilation of the genitals among the various savage tribes of the world presents a strange and unaccountable practice of human ideas, which one is not able to reconcile with any reasoning power. Why such customs should be in vogue none can tell at the present time; but we must suppose that at some period they had their significance, which in the course of ages has been lost, and the practice has been handed down from generation to generation. The savage bores his nose and puts a ring through it; the civilized woman bores her ears and puts a ring through them; one is just as reasonable as the other, and we may with all seriousness ask, why either?

The operation of circumcision among the Jews is, as you know, a religious rite, one commanded by their God; but with the other nations who practise it it is not always obligatory; it is a custom and not a dogma of their belief. Thus with the followers of Mahomet, all who believe in the Koran do not undergo this operation, nor does this book command it; yet the majority of Mussulmen have submitted to the operation.

The age at which the operation is performed differs with the various nations which practise circumcision. The Jews perform the rite on the eighth day after birth; the Mahometans at about the tenth year; others at the time of puberty, and even some at adult age; thus with a few African tribes it is done on the night of marriage, the bride receiving the blood from the cut on her marriage robes. Among the followers of Christ

this operation of circumcision has but in a very few instances been adopted. I believe, with the Abyssinians it is still a custom among them; and in the twelfth century there was a sect of Christians in Lombardy, France, who practised the rite, but it eventually was discontinued, and at the present time I know of no people or nation believing in Christianity who practise circumcision, unless it is the above-mentioned Abyssinians.

Passing from the historical part of the subject, we may consider the operation of circumcision in its moral, its hygienic and in its pathological relations.

The moral effect of the operation of circumcision upon the after-life of a child is often of great importance; indeed, his whole future may be very materially influenced by this little operation. It is admitted by almost all writers who have inquired into the causes of masturbation that one of the most prevalent causes in childhood is an abnormally long and contracted prepuce. That this should be a cause is very evident from the anatomical and physiological nature of the parts. The very great amount of nervous element in its anatomical structure makes it a part which is very susceptible to the slightest irritation, and the physiological function of the glands, which are found in this locality, furnishes the irritation which the nervous element is not slow to resent. Again, after the age of puberty the morals of the individual may be decidedly affected by the condition of his prepuce. I have observed, with others, that there are a certain number of men, and especially young men, who have become very much demoralized by the frequency

with which they have nocturnal seminal emissions. An examination of these cases will often reveal the etiological factor to be an elongated prepuce, the removal of which terminates all the trouble.

The hygienic advantages, which are the result of the operation of circumcision, none can doubt. Leaving aside the religious significance of the operation when performed by the Jews, there is no doubt that it was commanded to be done for its hygienic effect, and that the first and great teacher of hygienic medicine, Moses, certainly had this view in his mind when he gave forth the order, that all male children of Israel must be circumcised. I may say, in this connection, that it is not only those who, having an abnormally long and narrow prepuce, need to have this operation done; but if it is considered a necessity for cleanliness, the experience of most surgeons, I venture to assert, has taught them that—I will not say all men, but a very great many—should undergo the operation, since the very great frequency in which the uncovering of the glands reveals a condition far from clean; and this, among those with whom ignorance is no excuse, pleads strongly, on hygienic grounds, for the advantages of circumcision.

The pathological conditions which call for the performance of the operation of circumcision are indeed many; and when it is considered that a great many of these lesions might have been prevented by an early removal of the prepuce, it is strange that the operation has not become more universal than it is, and that the custom of the Jewish rite should not have been adopted by the Christians,

especially when so many of the Hebraic religious observances which bear upon the morals, hygiene and health of the human race are followed.

In considering the pathological conditions which require for their cure circumcision, we may divide them into two classes, viz., general and local.

First, general, or the states of the system in which there are seen the effects of the abnormal condition of the prepuce. The results of masturbation, when due to this cause, may very properly be placed under this head, and as an evidence of the correctness of considering the condition of the prepuce as the cause and the symptoms as the effect, by removing the former we cause a disappearance of the latter. Investigation has led observers to the conclusion that many neurotic conditions, the so-called reflex symptoms, are frequently due to an elongated and contracted prepuce, and the operation of circumcision has more than once cured a supposed case of hip disease. Nocturnal incontinence of urine is an affection which I have seen depending upon the irritation occasioned by an abnormal prepuce.

The local lesions which may result from a contracted and elongated prepuce are familiar to all surgeons; indeed their frequency is such that as an etiological factor in determining certain local conditions the abnormal state of the prepuce is denied by none. Irritation of the glands and inner surface of the prepuce, occasioned by the retained secretions, gives rise to inflammation and results in a blano-posthitis. Herpes preputialis, while it may not depend upon the condition of the prepuce for its origin, yet it will, in some few cases, only disappear

after the patient has been circumcised. Preputial calculi must have for their formation an elongated and narrow prepuce, otherwise such concretions could not be formed. Uncleanliness and a tight prepuce are the necessary conditions for the production of these calculi. They may have their origin from the calcification of the retained smegma; from a renal calculus being retained; from a retained vesical calculus and from the salts of the urine being gradually deposited until an appreciable stone is formed. To illustrate the extent to which this condition may be permitted to increase, Demarquay reports a case in which were removed no less than thirty-eight calculi, from the pouch formed by a contracted prepuce. Papillomata are not necessarily new formations which require for their growth certain conditions of the prepuce; but that an elongated prepuce favors their development, I think, is undoubtedly true. The following case came under my observation: A young man, 20 years of age, presented himself at my clinic with the statement that he had something the matter with his genitals. Upon examination the penis was seen to have its distal end enlarged to the size of an orange. The prepuce could not be retracted, and its opening only permitted a small-sized probe to pass through it. From this opening there was running a very fetid purulent discharge. The swelling had a doughy feel, and was not tender or painful. The history given by the patient was that he had never been able to uncover his glans, and four or five years previous he had first noticed that there was a discharge, without any pain, from the opening of the prepuce. Gradually the end of the penis in-

creased in size until it reached its present dimensions. He had never had any venereal disease; indeed, he had never had sexual connection. The condition of his penis, which had existed since about puberty, had, without doubt, had some influence in preventing him from exposing himself to contract any disease of a venereal nature. Realizing that there was something abnormal with his penis, he, as is usually the case with most men who are suffering with any affection of the genital organs, suffered in silence. He had never consulted any surgeon in regard to his trouble, and it was only on account of the extreme discomfort, occasioned by the discharge, that determined him to seek advice. I advised circumcision, which was consented to, and the enormous number and size of papillomata which the operation revealed were greater than I had ever seen described or met with in my practice.

The elongated and contracted condition of the prepuce favors, as we have seen, the accumulation of secretions, which may and often do occasion an inflammation of the part, and which results in that pathological lesion known as phimosis. This condition may at times be a very serious one, and, if not promptly relieved, a local gangrene may attack the foreskin. The latter result is more liable to complicate a case of gonorrhœa, in which the patient has neglected to pay due attention to cleanliness, and permitted the accumulation of the gonorrhœal discharge, which acts as the irritant. Blanco-posthitis, chancroids, chancres and vegetations are also causes which may give rise to an attack of phimosis in patients who have an abnormal state of the prepuce;

therefore in this class of cases more than ordinary care should be observed in reference to the frequent washing of the parts.

The lesion paraphimosis is a condition due and due only to a contracted and elongated prepuce, for without this latter condition there could be no paraphimosis. The affection is more often met with in those who have the foreskin elongated, but are able to uncover the glans by using a little force, and in the case of children who, from curiosity or bad example, may by their efforts succeed in uncovering the glans, but they are then unable to again cover it; soon swelling sets in, and we have the lesion paraphimosis produced. In adults this affection is not a very frequent occurrence, although it is occasionally met with. Bourgeois and Guersant each report a case which occurred under the same circumstances, viz., both patients were on their wedding trip, and during sexual connection the lesion was produced.

In regard to the operation of circumcision being advocated as a prophylactic measure against the future contraction of venereal diseases, it may be said that when the operation has been advised, with this end in view, there have been objections made against it on moral grounds. The objectionists are of the opinion that those who expose themselves to contract venereal affections should suffer for their immorality, and any measures, which have for their object the lessening of the risk of contagion, only offer inducements to commit evil. The absurdity of this objection is so evident that it needs no refutation on my part. Prophylaxis, in all that pertains to medicine, is undoubt-

edly the highest branch of the science. It is the prevention and not the cure of disease which should receive the most praise, be it directed against small pox or great pox. To relieve the sufferings of humanity is the object of our profession. It is not for us to question when, how or where the disease was contracted; and if by the adoption of any measures we could prevent the contraction of a disease, no matter what that disease may be, we are conferring a greater blessing on mankind than if we cured it of some existing affection.

The question which we have now to answer is, does the operation of circumcision, practised in childhood, offer any protection against the contraction of venereal affections later in life? This, I think, may unhesitatingly be answered in the affirmative. Do not understand from this that I believe the operation will invariably prevent infection; but from the observation of many surgeons, it is well established that the contracting of any venereal sore is much less among those who have been circumcised than among those who have not. In other words, the Jews as a nation are less afflicted with syphilis than other nations, not that they are less exposed to contract the infection, for they are equally so; but the reason why they do not become affected may be explained as follows: It is a well ascertained fact, of which there is no dispute, that the virus of syphilis, in order to inoculate one who has never suffered with this disease, must come in contact with a part of the body which is deprived of its epithelial covering, be it skin or mucous membrane; therefore, when any surface of the body which is naturally of a very

delicate nature, that is has its epithelial covering very thin, it is in a condition to be more apt to be abraded than a part which is covered with a thicker covering. The condition of the covering of the inner layer of the prepuce and glans of the penis of those who have a long prepuce, is of a very delicate nature, and the risk one runs, who has this condition, of having the covering torn is very great, much more so than if the epithelial covering was thicker, so that if there is any means of making it thicker it is a prophylactic measure against infection. There is such a means in the operation of circumcision. The way in which this operation acts, to bring about this desirable condition, is that the exposure of the parts to the constant friction of the clothing, and their not being protected, gradually causes the epithelial covering to become more of the nature of the skin rather than that of the mucous membrane, which it is more analogous to in its covered state; and it, therefore, follows that when in this more resisting condition the epithelial covering is not so liable to abrasions, and the virus is not absorbed into the system, the individual escapes infection. There has been an argument brought against this operation for the reason I have just given you in its favor. It is that this thickening of the epithelial covering is something to be avoided, and on the ground that while it may to some extent prevent the parts from being abraded so easily, yet, on the other hand, it lessens the sensibility of the parts to such a degree that the pleasure of the sexual orgasm is very much diminished. If this is true, which I doubt very much, I do not believe it to be

of sufficient importance to overbalance the good of the operation; and in those upon whom I have done the operation I have never had them to complain in any way, or to regret that they had submitted to be circumcised; indeed, it has always been the contrary; that is, they are thankful for the relief it has given them. Another objection against the prophylactic power of circumcision may be mentioned.

It is said that by the removal of the foreskin we take away the natural protection of the parts, that which nature had placed there to shield the underlying delicate structures from injury. This appears to be a just criticism, and there is no denying that it is partly true, but for this very reason is the operation justifiable. That the parts are of a delicate structure, and that in the performance of their function they are liable to injury, is not to be contradicted; therefore, if by any means we can remove the delicate nature of the parts, and also lessen their risk to injury, while at the same time we do not interfere with their function, is it not an evidence that our interference is justifiable? Again, the protection afforded by a long prepuce, and particularly if it is also contracted, is as above mentioned only partly true. Excluding the pathological lesions, which we have seen may arise from this condition, there is the probability, if not the certainty, that when the child reaches adult life, and assumes the duties of a husband, he will suffer from frequent abrasions, attacks of phimosis and, as we have seen, paraphimosis.

Before concluding my remarks upon the advantages of circumcision, there

is one other subject I wish to call attention to in this connection, one perhaps which has not received the consideration it deserves. It is the possibility of sterility being due to the presence of an elongated and contracted prepuce. That such a condition, especially when of an extreme degree, may occasion sterility, seems to me to be not only plausible, but a reasonable conclusion; and before the wife is censured, in every case where marriage is unfruitful, the husband should submit to an examination. If an abnormal condition of the prepuce is found, circumcision should be advised and results awaited.

Finally, there is one advantage in circumcision which I am confident must be admitted by all who have had any experience in the treatment of venereal diseases, and especially by those who have made this class of affections a special subject of study. It is the difficulties which arise in their treatment, and the complications which generally accompany these diseases when they occur in patients who are so unfortunate as to have a contracted or elongated prepuce; not only is this true, but the recovery of these patients is, under the best treatment and attention, always much delayed. Physicians, who in their practice see but little of venereal troubles, have a very slight idea of the amount of suffering which might be avoided if all who had contracted this class of affection had been circumcised in childhood.

The surgical procedures which have been adopted for the relief of an abnormal condition of the prepuce are dilatation, incision and circumcision. The first, dilatation, is recommended in certain states of the prepuce; that

is when there are no adhesions between the mucous membrane and the glans, when there is no redundancy of the foreskin, and, by some surgeons, in all cases where the operation of circumcision is advisable. My own opinion, in regard to this method, is that I would only advise it in those very rare cases in which there is some reason why cutting should be avoided; such as a known hæmorrhagic diathesis, or where the slightest loss of blood is not desirable. The objection to this operation is that it is not a complete relief to all the troubles which may arise from the abnormal state of the prepuce. It relieves the contraction and permits the uncovering of the glans; but it is not a preventive against some of the conditions which are liable to occur at some time during the life of the patient. For example, an elongated but not contracted prepuce may from irritation become swollen, œdematous and ulcerated, conditions which are not unfrequent in those who have contracted some form of venereal disease. Again, the long foreskin is not desirable for hygienic reasons, since while admitting that cleanliness may be and ought to be observed, whenever it is possible to uncover the parts, the truth is that it is not.

The method by incision, by which is meant the operation of making a longitudinal cut through the upper surface of the prepuce, extending as far as the corona glandis. Under certain conditions this method answers a very good purpose, and may be the only one practical. Thus, in a case of a swollen, œdematous and, perhaps, sloughing prepuce, such an operation offers immediate relief, and in most cases is all that is necessary to

be done. The objection to this method is that the ultimate result is not quite so satisfactory as the circular method; that is to say, the effect is not so elegant, and with some patients this is not an important matter.

The operation of circumcision, or the circular method of removing the prepuce, may be performed in several ways; yet the advantages of one method over another are so slight, or not at all, that if the object for which the operation is done is kept in mind, viz., to remove the abnormal prepuce, it is of very little moment how this object is reached. I do not propose to relate to you all the different methods which have been recommended, but will confine myself to describing the operation which I employ; it has given me good results, and I think it will do the same for you. The parts and surroundings are to be made surgically clean, and while it is not always possible to obtain union without some slight separation, yet the attempt should be made, and it is frequently successful. The question of giving an anæsthetic I leave to the option of the patient, if he is an adult, telling him I would prefer to dispense with it, but that the operation is painful and tedious, although a little courage on his part will save him from the after-sickness and discomforts of having taken an anæsthetic. In children it is best to administer an anæsthetic. The hypodermatic employment of a solution of hydrochlorate of cocaine may be used with satisfactory result; yet it is not free from danger. I saw one case in which it was employed, and, although the patient did not die, yet the effect was such that the operat-

ing surgeon then and there determined never to use the drug again for a similar operation.

To prevent loss of blood and to facilitate the operation I have generally placed an elastic ligature around the base of the penis. In the application of this ligature it is well not to tie it too tightly, since it requires but little pressure to stop the circulation, and the loose structure of the tissues admits of the easy rupture of small bloodvessels, which occasions a ring of ecchymosis that it is just as well to avoid. This ligature should always be removed before the dressing is applied, to ascertain whether there is a vessel which requires tying. The removal of the dressing and the opening of the wound are always annoying, and frequently interfere with the rapid healing of the incision. To determine whether there are adhesions between the inner surface of the prepuce and glans, a blunt probe or director is to be introduced and carried around the glans. If adhesions are present and slight, this manipulation will serve to rupture them. If, however, the attachment is quite firm, it is better to make the separation at a later stage of the operation. The next step is to retract the skin of the penis toward its base; this causes the opening of the prepuce to become tense at the junction of the skin and mucous membrane, the point where the constriction exists. A sharp hook, or tenaculum, is to be passed on each side from within out, that is, through the mucous membrane and skin, about one-eighth of an inch from the margin of the skin. Traction now made upon the hooks will draw the foreskin in front of the glans. A pair of narrow forceps are

placed just anterior to the glans, inclining from above downward and forward, in order to avoid cutting the frænum. With a sharp knife, all that portion of the prepuce in front of the forceps is cut off. Let me here give you a word of caution, which may seem unnecessary, but the blunder has occurred, as I have myself seen two patients upon whom the surgeon in operating, removed a portion of the glans; therefore, always before cutting be quite sure that you have nothing but the foreskin in the grasp of the forceps. The forceps being removed, a longitudinal division is made along the upper surface of the mucous membrane, reaching to the corona glandis. It is desirable that enough of the mucous membrane should be removed, and I have generally found that the result is best when sufficient mucous membrane is left to cover about one-third of the glans; it should not be all cut away. The skin and mucous membrane are now united by sutures, and the kind of suture is not of any great importance. I have, however, been in the habit of employing a continuous suture; starting on one side of the frænum and continuing around until the opposite side is reached. Remember never to cross the frænum with a continuous suture, since by so doing you have placed a ligature around the head of the penis, and, from the swelling which must necessarily take place, the constriction may be sufficient to completely stop the circulation, and sloughing of the parts will occur. I prefer for the suture a very fine catgut. This has the advantage of undergoing absorption, and the patient does not have to submit to the operation of having it removed, which, in

the case of children, is of considerable importance. All bleeding vessels are to be ligated with fine catgut.

The dressing to be applied after the operation of circumcision differs in children and adults. In the former—children—no dressing seems to have any special advantage, and I have restricted myself to dispensing with all, except to keep the parts thoroughly clean and profusely dusted with boracic acid. If the nurse is careful in carrying out your directions, healing progresses favorably, and the little patient is well in a week or ten days. In the case of adults I do the operation, using all antiseptic precautions, and apply an antiseptic dressing, with frequently the result of obtaining healing without any suppuration.

The complications which may arise during the operation are few. If the mucous surface of the prepuce is firmly attached to the glans, it is to be carefully dissected off. If the frænum has been cut, you will very probably have to ligate one or two small bloodvessels. If any of the glans has been unfortunately removed by your cutting, you will have to see that, in the healing, the meatus of the urethra does not contract and form a stricture, which lesion occurred in one of the cases I mentioned above, and necessitated an operation for its relief.

The complications which may occur after the operation of circumcision have never been, in my experience, of a serious nature. There have, however, been cases of death reported following, and as a result of, the operation. Secondary hæmorrhage has been the cause of death after circumcision; these cases, however, have generally been in those who were afflicted with a hæmorrhagic

diathesis, or were neglected. If the accident does occur, the wound must be opened and the bloodvessels secured by a ligature. The inflammatory œdema is sometimes quite excessive; this need give you but little anxiety; it passes away in a day or two. If, however, it is greater than you think safe and there is danger of its ending in sloughing, the astringent and anodyne lotion of laudanum and lead-water may be applied to the parts, and, perhaps, the removal of a suture or two will relieve the condition. The possibility of retention of urine should not be forgotten, and in the case of children inquiry on this point is important. The passing of a catheter for a few times will cause the complication to disappear. A most annoying and also painful complication, after the operation of circumcision with adults, is the erections of the penis, which are generally most frequent during sleep, and I have known them to very materially interfere with the healing of the wound. Camphor, opium, lupuline and bromide of potassium may all be administered, and possibly the patient will obtain relief; very often he will not. The normal morning erections, which are due to a full bladder, may be prevented if the patient will pass his urine an hour or two earlier than has been his usual custom.

In concluding my remarks I will briefly state that the operation of circumcision is one which may be performed for moral reasons; one which is demanded for hygienic purposes; one which is frequently necessary for pathological conditions; and, finally, one which is of unquestionable prophylactic importance.

