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NOTES

ON THE

HISTORY OF ATTEMPTS TO OBTAIN
RADICAL CURES

OF

INGUINAL RUPTURES.

BY

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NOTES, ETC.

THE ancient surgical writers give tolerably correct descriptions of various kinds of herniæ; somewhat confused, however, by their rather vague ideas of the anatomy of the peritoneum: some thinking that it descended into the scrotum and contained the testicle, while others thought that it was perforated at the inguinal rings, and others that it stretched tightly round the abdominal cavity. They divided them into two classes, viz., those which resulted from *relaxation* of the tissues (abdominal wall) and those *ruptures* which were preceded by a *rent* of the peritoneal sac, through which the intestines or omentum protruded. They also describe the serious and often fatal results which occurred from any collection of fæces in the intestine; but they do not seem to have performed cutting operations for the relief of strangulated hernia. Indeed, Ætius and others forbid any attempt to return the bowel after the prolapsed parts were affected with inflammation, tormina, and flatus.

Celsus says, that if pain, vomiting, and constipation are present, the knife is not applicable; much later, Spigelius and Hildanus say, the patient, however artfully operated on, will die next day, and it may be thought the surgeon had killed him.

Operations for the relief of strangulated herniæ are comparatively modern. Rossetus, who was professor at Venice in 1725, records three operations as marvels of surgical prowess.

The first of these was done by Florentius Vallensis in the public hospital, in presence of W. A. Clarensac, physician, John Arsentius, apothecary, and Ambrose Nigri, an experienced surgeon. These latter worthies, seeing that the gut was strangulated, "a sure symptom of imminent danger," left the patient—a beggar—to Florentius, whom Rossetus describes as "an old man, a first-rate man, famous amongst those of his brethren who make it their business to go about curing ruptures, and a perfect Machaon in cases of the stone: he did restore, *gratis*, this dying man from the grave, and happily inspired him with new life. He assured me that he had frequently performed it before that time."

At Blois, in 1559, two famous surgeons, Carlomagnus and Maupasias, operated on one Francis, a shoemaker, and cut off a piece of his caul. They also operated upon the schoolmaster of the district, who was hearty and cheerful for a long time after being cut and stitched.

Heister, writing in the eighteenth century, says, that after the battle of Oudenarde, he operated for strangulated hernia, as all the army surgeons refused, saying they had never seen it done.

There is no reason to imagine that ruptures were any less common in ancient than in modern times: and we find that in the short space of twenty-eight years, nearly ninety thousand ruptured persons applied for relief to one truss society in London; therefore, it is not surprising that numbers of precautionary measures were devised to prevent if possible the evil day in which, if it should arrive, even their greatest surgeons would decline to interfere with what they considered an irremediable condition:

1st, Operations for the radical cure of (inguinal) ruptures may be classed into those which have for their object the tightening and bracing up of the relaxed abdominal wall; and,

2d, Those where an attempt is made to obliterate the abdominal opening by causing adhesion of the adjacent surfaces of the ring on the hernial sac; and,

3d, Those where this object is sought for by infolding or invaginating a portion of skin.

All these methods were more or less similar in principle: all the means for tightening the loose abdominal walls being such as would irritate the skin, and it was supposed promote adhesion among the deeper tissues. Nothing was thought so efficacious as the actual cautery. Albucasis kept his patient in bed, did not allow him to move even his arms, and applied again and again a crescent-shaped iron, at last burning deeply into the part.

Severinus, who was professor of anatomy and surgery at Naples in the first half of the seventeenth century, which may be considered the surgical reign of terror, applied his favourite cautery to ruptures; and others used the moxa; while in China and Japan report said that pastilles the size of half a nutmeg were laid over the part, and allowed to burn slowly down, at last charring a patch of skin which sloughed away. From the warnings which most of these writers give of the prudence and care necessary in applying the cautery, we may infer that serious mishaps now and then occurred. Houston, writing in London in 1726, laments that in his day they were not so well skilled and dexterous in the application of it as the *bold* and *wise* ancients were. But many preferred potential cauteries. Leonides, writing from Antioch in the fourth century, says, that the scrotum may be burned and a scar produced with a medicine. The one he recommended was a plaster of the ashes of the roots of brassica, repeatedly applied. It would serve no purpose to recapitulate the numberless caustics which were used;

but one having been somewhat costly to the nation at large, I may allude to it.

As the hot iron, "which feared the people," was going gradually out of fashion, oil of vitriol was coming in and taking its place, as a universal remedy for all diseases. Castellus says, "that at Rome in 1638, of the 150 apothecaries there none wanted oil of vitriol in their shops; that the great and mighty virtues ascribed to it by Raymond Mindererus gave quacks and others a handle to use it as a universal medicine;" and Hildanus evidently alludes to it in writing of a "certain quack who came to Cologne pretending to cure all sorts of ruptures without castration or hurting the spermatic vessels. Great was the concourse of people to him. He began his cure by exulcerating the skin with a certain chemical oil, the name of which I conceal because of its dreadful effects." However, about 1726, Richard Bowles, one of that sect called Quakers, came out of Ireland with a nostrum for curing ruptures of all sorts, which, he said, he purchased from one Mr Shaw, an Irish merchant, who had picked it up in Leghorn. Though Bowles assumed the title of doctor, he did not succeed in London; so his biographer says, "he resolved to try his dexterity in some more fortunate kingdom; he, with courage, again ploughs the sea, and lands with his healing art in Glasgow in the west of Scotland; he then came to Edinburgh, but the discerning and wary people of Edinburgh (says Houston), who had often been pestered with such, did not give him much encouragement, so having sold his secret he went back to London."

The purchaser, one Thomas Renton, though under vows not to practice it beyond the Borders, went there too, very soon; ignored the existence of Bowles, and ingratiated himself with influential people, who brought him under the notice of George I. This sagacious monarch, "with a prudence equal to his generosity, was graciously pleased to issue out his royal orders, that the effect of the arcanum should be tried on some of his own domestics." Accordingly, two of his household were singled out for the experiment. Soon after we find the "Gazette" of February 13, 1722, appointing him to undertake the cure of all out and in pensioners afflicted with ruptures in the Royal Hospital of Chelsea; and while poor Bowles was expostulating, and the medical men ridiculing him, Government gave him a pension of £500 a-year, knighted him, and bought the secret for £5000, to be reserved for the good of his Majesty's ruptured subjects. This costly secret consisted in a purgative powder of aloes, etc., comfrey,—which seems to have been from the earliest days a remedy of Paulus Ægineta for ruptures,—and some odoriferous oil, as cinnamon or anise. There were also fragrant washes of rosemary, and if the parts were rigid they applied poultices of conium. The patient first took the powders for five or six days, and he then was ready for the cure. Having returned the bowel, put your finger where the breach (by which it

escaped) is ; afterwards, put oil of vitriol in a China cup—having in readiness some water in a cup, a good many soft rags, and a bandage of the softest flannel. Then dip your finger in the oil of vitriol, and rub the part where the breach is well ; let it dry in, and then wash your finger. So continue till you see the skin look white, then put on a plaster, a thick bolster of rags, and a compress. Renew this every day till it begins to suppurate and run matter, which will be in six to ten days. Then when the eschar comes off in about fourteen days, touch the sore with the silver caustic as often as there is any proud flesh.

This was the £5000 worth which Great Britain had become possessed of ; and almost at the same time Mrs Bowles, who seems to have been of much sterner stuff than her unlucky spouse, published it—and in English too—which, as the record says, “*was a great convenience,*” on a loose half sheet. But she made little by this ; as Dr Alexander Littlejohn, physician to the fleet, laid it before the Admiralty as his own invention, he was lucky enough to get Cheselden’s great name to endorse it, and a copy was sent to each man-of-war in commission, with orders to use it on all ruptured seamen.

It seems to have been soon laughed out of the service. Littlejohn, in his hurry, had not altered the rules of diet to suit a seafaring practice ; and one of these was a solemn warning against “*over-indulgence in greens and fresh milk.*”

Heister says, on the authority of Douglas, that Littlejohn also got £5000 for it ; but I find no corroboration of this, and it may be an exaggerated report of Renton’s bargain. The French king, Louis XIV., however, had bought the Prior de Cabrier’s secret before this ; and it was no more than some spiritus salis taken every day in red wine.

Alluding to the English purchase, a contemporary writer sums up its qualities thus : “*Artists will readily perceive the pharmaceutical part to be injudicious, the chirurgical part dangerous, and the dietetical ridiculously odd.*”

We find, in 1726, Monro secundus advising that, before the application of caustics, the skin should be divided ; and so late as 1841 there was a truss invented in Paris with a reservoir for holding caustic. But I think we may consider that the radical cure of herniæ, by causing sloughs, with either actual or potential cauteries, is no longer practised.

Those operations, which had for their object the complete removal or obliteration of the passage through which an inguinal herniæ descends into the scrotum, are very ancient.

Celsus describes two proceedings—one adapted for *boys*, the other for *men*. In the former, “*an incision was made down to the middle tunic, and the lips of the wound held apart with hooks, while the surgeon carefully separated the tunic—in other words, the sac—from the surrounding cellular tissue. Having done this, he extended*

the skin wound downwards, and carefully removed the testicle. In men, he was careful not to disturb the testicle, as it was found to create great inflammation subsequently; but they seem to have almost cleaned it, as dissectors would say, and it was the duty of one assistant to prevent its tumbling out of the wound. They cut a thong or strip of skin off the margins of the latter, so as to leave a broad cicatrix. Some burnt or cut away the omentum;”—a practice Celsus disapproves, as it endangers bleeding.

Paulus Ægineta describes a somewhat similar operation, making, however, his incision transverse or oblique to the direction of the inguinal canal. The margins of the cut were stretched with hooks to such an extent as would afford room for the testicle to pass through. Having dissected, with a blind hook or scalpel, sufficiently deep, they dislodged the testicle, gave it to an assistant to hold, then transfixed above it, with a large needle containing a double thread of ten pieces, and cutting the double, made four ligatures of it, which they crossed like the letter X. They sometimes put another ligature lower down, and cut between them, leaving about the size of a finger of the peritoneum, and cutting off the whole, removing the testicle at the same time; then making an incision at the lower part of the scrotum to favour the discharge, and introducing a pledget of lint, with embrocations of oil.

“I have known,” says Paulus Ægineta, “some not unskilful surgeons who, after the incision into the tunica V., burnt the extremity of it with heated cauteries for fear of hæmorrhage; and these, after the operation, straightway bathed their patients in a long trough containing hot water, until the seventh day, repeating this as often as five times during the period of a day and a night. More especially with children it succeeded wonderfully, for they remained free from inflammation, and the ligatures, along with the parts (sloughs), fell out speedily.”

Galen mentions a similar operation, and also pulling out the peritoneum and cutting it off. The Arabians, as in other matters, made clever copies of the Greek methods; but one can hardly comprehend how, year after year, these barbarous proceedings were allowed to spread over Europe.

Scultetus, in 1693, thinks it advisable to give diagrams of what appears to be an almost similar operation to what I have described as practised so many hundred years before,—“the method wherewith at Nursium in my time the most famous gelders of Italy did cure hernias of the intestine. The sick lies on his back and is bound on a table, then the whole dilatation in the groin is marked obliquely with ink, the assistant at the bottom of the abdomen presses together the intestines that they may not come forth; then the chirurgion, with a crooked knife, making an oblique incision of the skin, that the process of the P. may be seen, he cuts it with the same knife, and forces the testicle upwards and through the hole; . . . then he lays hold of the spermatic vessels with a convenient pair

of pincers, and he fastens them together; then cuts for the testicle, and casts it away. Others tie the spermatic vessels in two places; cut between the ligatures, and cast away the testicle. Then he made a hole for drainage purposes in the scrotum."

Ambrose Parée is not very explicit on the subject of herniæ. He mentions "a certain priest of St Andrews, whose office it was to sing an epistle with a loud voice, as often as the solemnity of the day and the thing required. Wherefore, seeing he was troubled with a grievous pain, especially when he stretched his voice in the epistle, I handled him according to art, made him give up singing, and wear a truss." He does not say what this "handling according to art" was. Parée describes the operation for strangulated, saying, "but before you undertake this work, consider diligently whether the strength of the patient be sufficient, and foretell the danger to the friends." At that time they called the condition of a strangulated hernia, "*miserere mei.*" It is remarkable that he does not allude to the operation by castration; as, in 1700, when one would have expected better things, it was usual for a number of oculists and other operators to resort to Frankfort at the fair time, to undertake the cure of persons afflicted with ruptures, cataracts, the stone, excrescences, and hare-lips,—there being at that time in Frankfort no one who cared to perform these operations.

These sort of people, says Heister, do not attempt the cure of their patients with trusses, because they seldom remain longer than the fair lasts; besides, if it had been in their power, it was what they did not choose on another account, the pay for a cure by a truss not exceeding ten shillings at most, whereas the operation was rated higher, and came to £5, or £10, or more; they therefore always recommended *it*.

Heister expresses his astonishment, that, in such a city as Frankfort, none knew how to cure an enterocele without the loss of the testicle. He tells, twelve years after this Frankfort fair, of one of these empirics having arrived at a village near Altdorf, and operated on a boy and a farmer,—the latter died. He also operated "on a tailor, who, for the first few days, found himself pretty well; but the operator, who loved brandy, and for whom the patient was often obliged to send for some, desired the tailor to drink some too, but he refused, fearing it might be hurtful. The empiric insisted on it; the tailor, being over-persuaded, drank a little; but the operator was not contented with that, but began to be very outrageous and angry, telling him he must and should drink out the glass, or otherwise he would not dress his wound, but let him lie and die." The poor patient was obliged, much against his will, to drink the whole glassful, which was pretty large—he fevered and died. Heister describes how artfully these itinerant surgeons concealed the testicle from the patient's gaze with one hand, while they removed it with the other. And Dionis, in his "*Cour d'Operations de Chirurgie,*" says, to give an idea of the number of these opera-

tions, that he had known one of these hernia-curers who fed his dog on the testicles he removed.

The higher class of practitioners greatly abhorred this cure by castration, and preferred the golden *tie*; for which purpose, says Parée, "a chirurgion which hath a skilful and sure hand is to be employed. He shall make an incision about the share-bone, into which he shall thrust a probe like to the cane (*i. e.*, the director), and thrust it longwise under the peritoneum, and, by lifting it up, separate it from the adjoining fibrous and nervous bodies to which it adheres; then, presently draw aside the spermatic vessels with the cremaster or hanging muscle of the testicle,—which being done, he shall draw aside the process itself, alone by itself. And he shall take as much thereof as is too lax, with small and gentle mullets perforated in the midst, and shall, with a needle having five or six threads, thrust it through as near as he can to the spermatic vessels and cremaster muscles. But the needle also must be drawn again into the midst of the process, taking up with it the lips of the wound, then tied with a strait knot, and so much thereof must be left after the section as may hang out of the wound. This thread will of itself be dissolved by little and little by putrefaction. Neither must it be drawn out before that nature shall regenerate and restore the flesh into the place of the ligature, otherwise all our labour shall be spent in vain."

It is evident that this was a confusion between the real punctum aureum, and the ancient operation I have already described; for Parée says, "that some chirurgions wrap once or twice about the process of the peritoneum a small golden wire, and only straighten the passage as much as may suffice to amend its looseness, leaving the spermatic vessels free. Then they twist the ends of the wire twice or thrice with small mullets, and cut off the remnant thereof. That which remains after the cutting, they turn in, lest with the sharpness it should prick the flesh *growing upon it*. Then *leaving* the gold wire, they cure the wound like to other simple wounds, and they keep the patient some fifteen or twenty days in bed, with the knees something higher and the head something lower. Many are healed by this means; others have fallen again into the disease from the ill twisting of the wire. There is also another manner of this golden tie, which I judge more quick and safe, even for that there is no external body left in that part after the cure; wherefore they wrap a leaden wire instead of the golden, which comes but once about the process of peritoneum, then they twine it as much as need requires, that is, not too loosely, lest it should give way for the falling down of the body; neither too straitly, lest a gangrene should come by hindering the passage of the spirits of nourishment. The ends thereof, when the peritoneum seems callous, are drawn out, the wire being untwisted." This never seems to have become very popular in this country. One great surgeon, Wiseman, says, "puncture and deligation are

not practised among our people, they esteeming such operations full of hazard and cruelty." However, he describes the proceedings I have already mentioned; and, for "the cure by puncture," refers his readers to what is set down by Ambrose Parée.

However, the father of English surgery impresses on his disciples the necessity for trying to return the rupture; recommending "to let blood, purge or vomit, or put the patient into a semi-cupium; after which, if occasion require, he may be carried to and fro upon the back of a strong man with his head downwards, by which the prolapsed bowels are often reduced. Mr Smith, the truss-maker, told me (says W.), he had made an engine by which he set them on their heads."

Peter Francis advises that the wire should be of gold, and thick as a large pin. He surrounded the cord with it, and twisted it with pincers, flattening it down. This shrewd old surgeon clearly distinguishes between what may be done with linen or silk threads and one of gold, which is "*ami de nature comme le plomb.*"

Another object of using wire seems to have been, that they could pinch its loop narrow at one part without necessarily interfering with another. But all these cunningly devised measures fell into disuse; and Dessault, writing at the end of last century, calls special attention to umbilical herniæ in infants, as the only kind which can be cured by the ligature. Mr Liston, thirty years later, writing in Edinburgh, alludes to these operations, and says, "after the neck of the hernial sac had been destroyed, protrusion again took place."

It was at last proposed by Dzondi to seal within the abdominal ring a plug of skin, having first shaped it out by proper incisions; and in the "Lancet" of 1828-9 (May 2), is recorded a case treated by Dr G. Jameson of Baltimore, of a young lady who upbraided him for having saved her from death by operating for a strangulated hernia, only to leave her with her rupture as liable to protrude as ever. As she had a fretful and irascible temper, Jameson performed the operation assisted only by her maid; it consisted in dissecting a lancet-shaped tongue of skin from near Poupart's ligament, stuffing it into the aperture, and then stitching the skin wound close. Dr Jameson is somewhat vague in his description of this case, but he seems to have been satisfied with its result, though "much disappointed with the deportment of his patient."

Signoroni (Bulletino Medico de Bologna, Dec. 1836,) thrust up the skin and fixed it by means of a female catheter, then transfixed with hare-lip needles and the twisted suture. Gerdy had already thrust up the skin, passed a thread twice through the tissues, the operator endeavouring to include the walls of the inguinal canal, and then tying the thread tightly over a cylinder of plaster. If the aperture should be large, more than two stitches could be applied, and the invaginated pocket of skin made raw with caustic liquor ammoniæ. Wützer improved upon this by joining to it a plan recommended by Richter, Langenbeck, and others, of a plug; theirs

was formed of linen or sponge dipped in turpentine or other blistering fluid, but his was of wood. To this Wützer combined irritation within the sac by a needle, and pressure from without by a plate of metal or ebony (some hard material).

In the "Lancet" of 1829 is a paper describing some experiments by Mr Belmas of Paris, who conceived the idea of introducing small bladders filled with air into the abdominal cavity, to see what would become of them, provided he should be able to find some substance delicate enough to be acted on by the absorbents. He found this in goldbeaters' skin; and that after some weeks they were replaced by firm fibrinous masses. He collected all the ruptured bitches (he got thirty in three years), and tried to excite inflammation within the peritoneal sac by inserting. He succeeded in curing thirteen of the thirty bitches, and one or two men. He introduced through canals thin sacs of goldbeaters' skin filled with jelly. This proceeding never became universal, even for a time. Among this class of cases may be included the plan which has been so successful in the hands of Professor Pancoast of America, namely, injecting sol. of iodine or trœ. of cantharides into the sac. Neither of the surgeons I have mentioned have found that the inflammation showed much tendency to spread into the abdominal cavity. Within the last few years this question has again taken possession of the general attention of surgeons in this country; allusions to it are again to be found in class-books, lectures, and weekly periodicals; and some who have rarely taken public cognizance of any surgical proceeding, without simplifying its details, and reducing them to more universal usefulness, have already brought the question before this society. I believe the first to introduce Wützer's operation into Scotland was Professor Lister, now of Glasgow, who succeeded in curing a patient, and it has been tried several times since.

From my own very limited experience, and from what I have heard from others, there seems a great tendency to relapse, the gut coming down by the obliterated posterior part of the sac. Mr Wood's and Professor Chisholm's operations, which somewhat resemble Gerdy's, are less liable to this objection.

I have refrained from making any critical observations on the present modes of operating which must be familiar to all who are present; but I would call their attention to this, that the present endeavour seems to be to combine what the ancients tried for singly,—obliteration of the inguinal aperture, and adhesion of the deeper tissues, by irritation within and pressure from without. There is very nearly complete success, as a rule, with Wützer's method: However, there is probably required, to complete it, one single addition, which, being hit upon, would solve the problem.

Since the above was written, I have seen patients of different ages operated on by Mr Wood's two methods, viz., with or without cutting the skin. In both, however, perfect anæsthesia is necessary; the finger must be pushed up until the lower margin of the

internal oblique is felt, and in the operation with incision Mr Wood ties a piece of thick silver wire round the sac. It is unnecessary to say that the cord must be carefully excluded both from needles and ligature. I saw several of this gentleman's patients who had been operated on some years before, and had no return of their ruptures. He seems to prefer the operation without incision for children.—(See his own papers in *Lancet*, *Braithwaite*, etc.)