IS OVARIOTOMY JUSTIFIABLE?

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THE question, whether ovariotomy is or is not an operation that should be resorted to for the cure of any class of cases of ovarian dropsy, has been recently the subject of renewed discussion in the Medico-Chirurgical Society of Edinburgh. My own opinion was there stated,* to the effect, that although individual cases might possibly occur, where resort to the operation was justifiable, yet that there was no class of cases of the disease for which it was a suitable therapeutic measure. The observations, however, made by myself, in that Society, require further enforcement and enlargement.

First of all, it is easy to show that the defenders of the operation in that Society have involved themselves in a dilemma. They tell us that the operation is as justifiable as any of the great operations of surgery. They sanction and commend the practice of Dr. Clay, as a whole. They admire and hold up the results of his numerous operations. They colour their descriptions of the disease with as much danger as they can make adhere to it. They do the same in regard to the alternative palliative treatment by tapping. These gentlemen, pursuing this line of argument, are in extensive practice. Taken together, they are ever seeing, I believe, as many cases of ovarian dropsy as any equal number of obstetricians that ever met to defend ovariotomy. And yet, incredible to relate, they have only one case of ovariotomy to show for years of experience in the treatment of this disease. More incredible still, the palliative treatment, which they vilify and asperse, is the treatment which, it is notorious, they adopt. The position of my friends Dr. Clay and Mr. Edwards is easily admitted as reasonable. They believe ovariotomy is a good and justifiable treatment in a certain class of cases of this disease; they resort to it and recommend it to their patients. The defenders of ovariotomy who strove in that Society to overthrow my reasoning in regard to it, act as I do. They have to explain how it is that their practice is different from their profession. At present they are in a position which, for character's sake, they must desert; for they defend an operation as a good and salutary measure, as saving life, and yet they do not perform it, nor do they get their surgical friends to do it for them.

It would be a difficult undertaking to *demonstrate* that ovariotomy is an unjustifiable operation, with the imperfect data now in our possession. In the sequel, it will be seen that I refer all such difficult and complicated practical questions as this to the arbitrement of professional opinion, as the ultimate resort. It is well known that professional opinion is, generally speaking, very decided against the propriety of ovariotomy, as a remedy in ovarian dropsy. But, on whatever side professional opinion might be found, it is not incumbent on the opponents of ovariotomy to do more than show how all the arguments in defence of the operation are successfully assailed. It is, however, the manifest duty of the defenders of the operation to do all they can to acquire for it the position they desire.

In framing defences in future, ovariotomists must, to use an idiom, make the operation speak for itself. The statistical arguments adduced, in form of comparisons, of ovariotomy with other recognised operations, have two great sources of weakness. For, firstly, as we shall immediately point out, the statistical arguments are conducted with such looseness and disregard of logic as to destroy their value. Secondly, if the statistical arguments were well established, it could justly be objected that they prove nothing, unless it be admitted that the objects of comparison were themselves justifiable. If, for example, the statistical comparison between a hundred ovariotomies and a hundred amputations of the thigh were made to yield a result favourable to ovariotomy, it would still have to be shown that the amputations were justifiable. The fact that one operation is as justifiable as another, does nothing towards showing that either one or the other is itself essentially good.

All that we can, with our present data, perform, is merely to make an approximation to an argumentative solution of the question of ovariotomy. Before a conclusive proof could be led on either side, it would be necessary to settle many points in surgical ethics which have not yet been mooted in this question, but which some statisticians assume in their own favour. Some of these I shall here merely raise, without saying more than that I am inclined to think they must be answered in the negative.

Can a surgeon or physician, with safety or advantage, bring distant statistical arguments to the bedside of a patient? Is not every case rather a matter of separate study, and to be treated by the clinical phsyician or surgeon apart from difficult questions of the application of statistics to therapeutics, and the results of such statistics?

Can a surgeon or physician ever dare to reason statistically as follows? I have four cases, all destined to an early death. I shall subject one patient to quick destruction in order to secure for three the ordinary chances of life?

Can a physician or surgeon ever dare to reason statistically as follows? I have four patients, all of whom may live to the natural term, but will probably die within six years. I shall subject one to quick destruction, in order to secure for three the ordinary chances of life. Has any man right so to deal with human life?

Authors, in general, treat this subject in a curiously inconsequent way. For instance, in the Medico-Chirurgical Society, Dr. W. T. Gairdner justly pointed out the two aspects, one of which most cases of ovarian dropsy presented. In the one, the circumstances of the case were consistent with continued life, and some degree of comfort; and the operation was too dangerous to be recommended. In the other, the disease was far advanced, the patient's health much injured, and the whole constitution in a state very unfavourable for the operation. But Dr. Rigby, a defender of ovariotomy, in his interesting work recently published, points out, in a similar way, the two aspects of cases of ovarian disease, and yet recommends the operation. Dr. Gairdner had never seen a case suitable for ovariotomy—a circumstance quite in accordance with his statement. Dr. Rigby approves of the operation, but so encumbers with conditions the two classes of cases of ovarian disease,—1, the generally healthy and comfortable, and unsuited for operation; and, 2, the aggravated cases unsuited for operation,—that none are left for the surgeon's knife.

Another instance may be given from the discussion in the Society. Dr. Simpson then said that "he particularly doubted whether surgeons were justified in so often subjecting patients to a great chance of speedy death, from a severe surgical operation for the removal of a disease which might still allow of the continuance of life for many months or years, before it would probably, in the common course of the malady, reach a final and fatal termination."* These remarks are, I believe, very just, and the doubt very proper. But, then, Dr. Simpson has no such remarks on ovariotomy, and no doubt about it!—an operation to which the remarks and the doubt were more appropriate than to any other.

Another illustration is too apposite to be passed over. Dr. Simpson supposes, that by Dr. Southam's table of twenty cases of tapping, he proves that one in every five first tappings is fatal. In his late speech he said he had had about thirty cases of tapping followed by injection of iodine; none of these was fatal, except one which he supposes died of the tapping, not of the injection. He is hence confined to the absurd conclusion, that while a first tapping kills one in five, tapping, followed by injection of iodine, has no evil results!

The loose and illogical use of statistics.—Statisticians are justly proud of the value of the numerical method of inquiry, and can point to many proofs of its uses and advantages. But, unfortunately, the opponents of statistics can be at no loss to find ample evidence of its being a method worthy of little confidence when wielded without sufficient knowledge and care. This has been frequently pointed out by statisticians themselves; and medical philosophers have uttered ominous warnings to their fellow-inquirers not to confide in them on questions of therapeutics such as the one now under consideration; but in vain.

The statistical argument in favour of ovariotomy has been used by Southam, Safford Lee, and with the greatest ingenuity by Dr. Simpson. It was stated, several years ago, at great length in the Medico-Chirurgical Society. It was conducted by comparing the statistics of ovariotomy with the statistics of other operations. Some of the grand errors in that statistical comparison it is necessary to point out.

1. The comparison, if intended to yield results in favour of ovariotomy, or against any other operation, must be confined to those operations, and conducted to a termination. Afterwards the like may be done in regard to some other surgical operation, and conducted to a termination. Instead of this the statistics of all surgery are rummaged for arguments in favour of ovariotomy, and a triumph proclaimed in its honour,

* See Edinburgh Medical Journal for February, 1857, p. 752.

* Edinburgh Medical Journal for February, p. 757.

because all the difficulties and dangers of the most severe operations are not found in connexion with it. Is it desired, for instance, to extenuate the danger and mortality of ovariotomy? Then the statistician easily adduces operations with a greater average fatality—amputations of the thigh, (and of the arm!) —ligature of the subclavian artery, or of the innominata. Is it desired to screen the difficulties of ovariotomy? Then the difficulties of lithotomy, of tying arteries, are adduced, &c.

2. For the purposes of useful comparison, it is necessary that the objects compared have their prominent characteristics in common. Any essential difference must, at least, be pointed out. But instead of this we had, for instance, ovariotomy compared to amputation at the hip-joint, or of the thigh. Ovariotomy need not be described, it has a distinct individual character. But amputations are of very different kinds or classes, and these, for all useful purposes, totally unknown, and certainly undescribed by the statistician. The comparison might justly be made in regard to mere mechanical circumstances of the amputation—thus, seventy amputations at the hip-joint have been done, and so have seventy ovariotomies! In carrying the comparison further, the statistician is but a blind leader of the blind. The average of deaths after ovariotomy is less than after amputation at the hip-joint. This proves nothing in any direction. Were the amputations for chronic disease, like ovariotomy? It is not known. Were the amputations performed for accidents, in themselves almost necessarily fatal? It is not known. Were they for malignant disease? It is not known. Were they for gangrene of the limb after fever or ligature of an artery? It is not known. In short, the whole comparison is done in total darkness.

3. For the purpose of a useful comparison, the circumstances of the operation must be nearly alike. But instead of this, the statisticians place ovariotomies, done in the most favourable circumstances, watched with the tenderest care, against operations done in hospital, on young and old, on temperate and intemperate, &c.

4. For the sake of justice, it is necessary to compare the statistical results with the antecedents of the operations. For a greater fatality in amputations than in ovariotomies is quite consistent with the amputation being, in spite of that circumstance, the more justifiable, and even, in a sense, the safer operation. For the amputations may (and very probably) have been all done in cases quickly and certainly tending to a fatal termination; and a small fraction saved may prove a far greater triumph of surgical skill than a larger number, or fraction, saved after ovariotomy. For in the ovariotomies death was possibly far from being near at hand in many, if not most of the cases, while some of the dead might have long survived but for the surgeon's knife.

If statistics are to be used in such a loose fashion as I have described, it may be truly said that by their help no absurdity need despair of evidence. But I proceed to another aspect of this method of advancing medical science.

The absurd use of statistics.—When, in the Medico-Chirurgical Society, I pointed out the statistical conclusion, that tapping was fatal to one in every five operated on, as a glaring instance of the absurdities into which statistics allured those who failed to use them aright, I was told that the great mortality in the operation attached itself to first tappings; and this formed the whole justification of Southam's well-known table. Of this table of twenty cases, Dr. Simpson says:—"Fifteen of these cases had been recorded by Drs. Bright and Barlow, without apparently any view to such an investigation, and hence afforded the more valuable and unprejudiced evidence. Four of the twenty, or one in five, died from the effects of the first tapping."* It is a curious but vain endeavour to conceive how Drs. Bright and Barlow could illustrate the danger of tapping in a valuable and unprejudiced manner because they had no intention of illustrating it at all. The exposing of the real circumstances of this table, and of the arguments founded on it, will form to future inquirers a valuable warning against putting faith in statistics, when used to support any practice whose promoters are struggling for defence.

The table, then, is used by Safford Lee, Simpson, and others to show that the first tapping in ovarian dropsy is a proceeding nearly as dangerous as ovariotomy—that the mortality from it is about one in five. If Drs. Bright and Barlow had published all their hospital cases of tapping, or all their private cases, then we might have had data of some value. But what is the fact? Dr. Bright's paper, from which the table is got up,† contains the histories of twenty-four selected cases of ovarian disease, all of which (with two exceptions) are completed by accounts of the post-mortem examinations. Most of them were women coming into hospital with the disease in an advanced stage. These cases were selected by Dr. Bright, and wisely so, to illustrate the pathology and terminations of the disease. Some of them were cases of malignant disease. It is almost too ridiculous to be believed that these cases should be used in reference to the question of first or second tappings.

Of the four so-called fatal cases of first tapping in Southam's table, three are drawn from Dr. Bright's able paper in the "Guy's Hospital Reports." Let us examine them briefly:—

1. In Dr. Bright's words: "She could walk from Peckham to London and back, and she was fond of dancing.—June 18th, 1831: She was tapped in the middle line, about an inch below the umbilicus; a few drachms only of fluid came away, when a little cyst protruded, almost like an hydatid, but it was attached within, and was returned; a small quantity of blood escaped. Within an hour or two of the operation she began to experience collapse, and died within twenty-four hours." This is evidently an example of death from tapping. Dr. Bright does not say it was a first tapping. It is not unimportant to observe that it is quite an exceptional case, on account of the circumstances of the hydatid and the escape of blood, &c. &c. Moreover, it is very doubtful if palliative tapping includes cases of the operation on a woman who was a strong walker and fond of dancing. The title of the case makes it evident that it is related because it was fatal after the tapping.

2. This case is also selected in order to illustrate death from tapping. Dr. Bright does not say whether the fatal tapping was a first operation or not; the statisticians assume it.

3. This case was, according to Dr. Bright's account, not one of a first tapping, for he says, "the fluid in the cyst differed entirely from that which had been drawn off two months before." The case was not under Dr. Bright's immediate care, and death was the result of the first of an intended series of tappings to be tried, after a peculiar method, as an experiment.

4. To make up the four fatal cases, one is taken from Dr. Barlow's paper.* In this case, it is not stated whether the tapping was a first operation or not. Mr. Abernethy, writing of this case, said, "I do not remember a diseased ovary advancing with such continued irritability or disposition to inflammatory action." Dr. Barlow's description is as follows:—"Enlargement proceeded rapidly, but fluctuation became indistinct, and at length ceased to be felt. Much suffering was endured, which terminated in death towards the end of October. A short period before death, an attempt was made to relieve the oppressive distension by tapping, but unsuccessfully." The perusal of this case leaves the reader without the slightest ground for thinking the tapping was the cause of death; quite the reverse. Dr. Barlow's whole paper consists, like Dr. Bright's, of cases so selected as to illustrate points in the pathology of this interesting disease.

But the climax of absurdity is reached in this argument, for I find that Dr. Southam's table of twenty cases is not one of first tappings. Of the twenty, eleven had been repeatedly tapped. Nine only are *said to be* cases of first tapping. They were all followed by death, and it will puzzle the wittiest to explain why the four cases above described were selected from the whole twenty, to strike an average of one death in every five first tappings. If the table proves anything, (which I doubt,) it proves that every first tapping is fatal! and that after tapping a woman still must die some time or other!

I need say no more, for enough has appeared to show that the bases, superstructure, and uses of these statistics are not only worthless, but ridiculous. It is not my purpose at present to discuss the mortality of tapping. No doubt it has a mortality;—so has phlebotomy, says M. Velpeau.

In the discussion so often alluded to, more than one speaker disparaged what was called, very appropriately, "surgical instinct." This phrase was used to indicate the opinions of great and wise practical men, arrived at none the less surely because, to some extent, by a series of logical steps which they cared neither to investigate nor discover. The disparagement was thrown on their own profession and on themselves. It was a self-destructive act. None of them made a good defence of ovariotomy, and if they had fallen back on their opinions, would have been in some sense impregnable. The opinions of great and wise practical men are, and will be, the great resting-place of the profession and of the public. These men are almost all inimical to the operation under discussion. Many of them flatly repudiate it a place in regular surgery. Others, like

* Obstetric Works, vol. i., p. 266.
† Guy's Hospital Reports, vol. iii.

* Transactions of the Provincial Medical and Surgical Association, vol. iv.

Professor Miller, arrive at the same result by encumbering it with impossible conditions.

Casting contempt on surgical instincts, what have the defenders of ovariotomy to offer us instead? Nothing but flimsy and fallacious arguments of the kind considered in this paper.

Castle-street, Edinburgh, Feb. 1857.

A Mirror

OF THE PRACTICE OF

MEDICINE AND SURGERY

IN THE

HOSPITALS OF LONDON.

Nulla est alia pro certo noscendi via, nisi quam plurimas et morborum et dissectionum historias, tam aliorum proprias, collectas habere et inter se comparare.—MORGAGNI. *De Sed. et Caus. Morb.* lib. 14. Procemium.

ST. MARY'S HOSPITAL.

GUNSHOT WOUND OF THE FACE OF A GIRL, INFLICTED WITH A HORSE-PISTOL LOADED WITH PEBBLES; DESTRUCTION OF THE RIGHT EYE, WITH TEMPORARY DEAFNESS OF THE RIGHT EAR; DISFIGUREMENT OF THE FEATURES FROM GUNPOWDER, WITH ULCERATION OF THE LEFT CORNEA FROM THE SAME CAUSE; RECOVERY.

(Under the care of Mr. URE.)

WE are always glad to record cases which, like the present, have formed the subject of medico-legal inquiry, and on trial of the perpetrator of the dark deed, followed by conviction. The particulars will most probably be still fresh in the recollection of our readers, and excited at the time a good deal of attention. We watched the poor girl from time to time, until recovery ensued; her features were completely spoilt by the gunpowder, and thus pretensions of some moment to one of her sex were almost destroyed. In a former "Mirror," (THE LANCET, vol. i. 1856, p. 685,) we recorded a series of cases of stabbing under Mr. Hancock's care at the Charing-cross Hospital, of some interest and importance to the medical jurist; and we hope shortly to give the leading features of the injuries sustained by the poor man Cope, who was a patient under Mr. Holt at the Westminster Hospital, and whose murderer recently underwent the extreme penalty of the law.

In some clinical remarks which Mr. Ure made respecting the case, he observed, that while gunshot wounds invariably slough, it is remarkable how small a cicatrice is left. In reference to the partial deafness under which the patient laboured for some time after the receipt of the injury, he said he had been informed by an inspector of hospitals at Chatham that the soldiers engaged in the Crimea who had sustained gunshot wounds above or to the side of the orbit, or in that vicinity, were uniformly deprived of hearing in the corresponding ear. He ascribed the steady recovery of the patient to her calm and unruffled disposition, her pulse having never deviated from 72 beats in the minute during the most trying period of her suffering.

Emily L——, aged twenty-three, a servant, was brought to the hospital, at ten o'clock P.M., on the 7th July, 1856, having been shot in the face, half an hour previously, with a horse-pistol loaded with pebbles. The deed was perpetrated by a young man, a former suitor, who, seizing the opportunity of the woman's coming to the door, discharged the contents of the weapon at her head. He was tried for the crime at the September assizes of the Old Bailey, and sentenced to twenty years' transportation. Immediately after the pistol was fired the woman fell to the ground, stunned by the blow. When admitted, there was an irregular contused and lacerated wound situate over the right orbit, measuring about an inch and a quarter by an inch; the margins were uneven and notched. The upper eyelid was torn through at the outer canthus. On raising the eyelid, which was much swollen, the eye was found quite destroyed, with the iris protruding. The left upper eyelid was swollen and red, ecchymosed in patches, and incapable of being opened. The nostrils contained some crusts of blood. The face was swollen and tattooed from the effects of the gunpowder, especially the forehead, the cheeks, the left side of the nose, the upper lip, and the chin. She complained of violent tearing pain in the site of the wound and in the corresponding orbit. Mr. Ure directed pledgets of lint soaked in water to be kept applied to the injured parts, and prescribed an anodyne draught.

July 8th.—She slept a little during the night. The skin was rather hot; pulse 72. She complained of thirst, and of agonising pain referred to the right eye. She was placed on simple diet, with a pint of beef-tea; and ordered effervescing saline draughts, with an opiate at night.

9th.—Nine A.M.: The surface of the wound was disposed to slough; she still suffered from pain in the right eyeball, which made her restless during the night and prevented sleep; the bowels had not been relieved since her admission. Ordered a dose of castor oil.—Half-past five P.M.: Pulse 72; skin moist. She felt more comfortable than in the morning, the pain having somewhat abated.

10th.—The pulse remained at 72. She passed a better night than before. The wound over the right eyebrow was rather circular in shape and about the size of a florin; the surface was ash-grey; no exposed bone could be felt. She still experienced great pain at times, referred to the damaged eyeball, the closed lid of which was exquisitely tender to the touch; there was considerable swelling, with a faint-red blush, spreading over the right side of the face as far as the ear; the integument covering the glabella had a boggy feel. The inner canthus of the right eye was suppurating; the left eyelid continued closed and swollen, and had a dusky-red hue. She was unable to distinguish the tick of a watch beyond three inches and a half from the right ear; with the left ear the hearing was normal. She had no headache; the thirst was abated; the tongue clean and moist. The oil had procured two alvine evacuations. She had no relish for food, but was able to take some bread-and-butter with tea in the morning, and was allowed two pints of milk in addition to her diet.

11th.—She passed a good night, having slept from ten P.M. till two and afterwards till five A.M. Was easier at the hour of visit, but had previously felt great pain in the eyeball for two or three hours; the wound was suppurating freely; appetite deficient; pulse still 72; tongue clean and moist; the skin perspiring.

14th.—Slept well without the anodyne draught: the pain was allayed. She took broth for dinner, both this and the previous day, with relish.

17th.—A small portion of the bone of the supra-orbital ridge was felt denuded; the wound continued to suppurate; the left eyelid remained closed, and on gently separating the lids, the conjunctiva was seen in a state of chemosis.

24th.—The hearing of the right ear was quite restored; the wound was proceeding favourably, though bone was still exposed; she was yet unable to open the left eye; on careful examination, it was ascertained that the cornea was ulcerated in one or two points, and there was considerable surrounding inflammation, evidently caused by grains of powder impacted in the sclerotic conjunctiva. She was applying water-dressing to the wound; and to the left eye, a lotion composed of decoction of poppyheads, with the addition of a small portion of solution of diacetate of lead, which had a very soothing effect.

August 4th.—Was dressed in her usual clothing, and sitting up; she felt weak; the wound was much contracted in extent; the condition of the left eye was improved; there was less intolerance of light than before; the patient, however, still kept the lids closed, and when drawn apart a gush of tears always ensued. She had eaten daily for some time a mutton-chop at dinner.

31st.—She was able to use the left eye a little, although it was still rather intolerant of light.

Towards the end of October, when the parts were firmly cicatrized, Mr. Ure requested the advice of his colleague, Mr. White Cooper, as to the propriety of adapting an artificial eye to the cavity of the right orbit. Mr. Cooper deemed the case eligible, and was good enough to instruct Mr. Gray, of Goswell-road, to fit in one, which has been skilfully done. This has in a great measure removed the unseemly appearance resulting from the cruel injury which was inflicted. The face, however, still retained, at the period when the patient left the hospital, (Dec. 1st,) a dark, mottled aspect, from the remains of the particles of gunpowder.