DID JOHN DE VIGO DESCRIBE ACUPRESSURE IN THE SIXTEENTH CENTURY?

BY

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WHEN, several years ago, the idea of arresting hæmorrhage by acupressure first occurred to my mind, and I began to work out the different methods of applying it, I made a somewhat extensive search through such surgical literature as I had access to, with the view of finding out whether the same hæmostatic principle had been previously proposed or not. I entered on the literary part of the inquiry, fully believing that such a very simple and efficient mode of staying the bleeding accompanying surgical wounds and operations would, in all likelihood, have been suggested by some surgical authority or another; and I was surprised, rather than otherwise, to find no traces of it whatever in the past records of practical surgery; for it is confessedly rare, that we have ever operations or plans of practice now adduced—and much less any great general principle of treatment such as acupressure—without being able to discover some more or less distinct notices of them in antecedent times.

In the last number of the BRITISH MEDICAL JOURNAL (p. 121), it has been stated, that long ago John de Vigo has described one mode of acupressure; but the statement is, I believe, erroneous, and arises entirely from a misinterpretation of the Latin description by John de Vigo of the tying of bleeding vessels.

The statement itself occurs in the very able and eloquent Address in Surgery, which was delivered on August 8th by my friend Professor R. W. Smith, before the annual meeting of the British Medical Association at Dublin, and published in the *Irish Times* of the following day. In this address he adverts rather severely to the modern neglect of the works of the ancients, and to the consequent reproduction, in modern times, of some of their modes of treatment, operations, etc., "clothed in all the glittering charms of novelty." As an example, and, in his own words, "a most remarkable one," he cites John de Vigo as having long ago described the arrestment of hæmorrhage by acupressure. Professor Smith gives his alleged account of acupressure in the following words:

"Fe (John de Vigo) says it was the practice of some to tie the veins and arteries, when opened, with a needle and thread. *Modus autem ligationis. Eam aliqui efficiunt intramittendo acum sub vena, desuper filum stringendo.* Is not this" (Dr. Smith adds) "the third mode of acupressure of Sir James Simpson?..... who, it is obvious, was not aware of the passage I have quoted."

I have, however, been long familiar with the passage concerning hæmorrhage alluded to in John de Vigo's writings. But the passage assuredly refers to the ligature of vessels, and not to their acupressure; and in this view I have cited the name of the author in my work on *Acupressure*, p. 187, among those who anteceded Paré in the use of deligation.

The words of De Vigo, as quoted by Professor Smith, are taken by him, at second-hand only, from Portal (see his *History of Anatomy and Surgery*), who gives them in a somewhat abridged and mutilated form. If Professor Smith had referred, as I rather think he ought to have done, to the original work of John de Vigo, he would have found him, in his *Liber de Vulneribus*, describing two modes of securing vessels, in his chapter "De Fluxu Sanguinis et de ejus cura", in the following words: "Necessarium est aliquando ligare venam presertim arteriam quia ipsa ligata locus a facile incarnatur remedio. *Modus autem ligationis earum aliquando efficitur intramittendo acum sub vena desuper filum stringendo cum facilitate aut ligatur vena ipsam excoriando deinde in superiori capite cum filo optime stringatur.*" (*Opera Domini Jo. de Vigo in Chyrurgia Excellentissimi*, 1538, liber iii, tractatus i, caput 2.)

In order to understand these directions, we must remember that, till the time of Ambrose Paré (half a century after the time of John de Vigo), the arteries, after amputation, were never tied, but were always cauterised and burned.* Arteries and veins, however, laid open in accidental wounds and slight surgical wounds, were sometimes attempted to be ligatured in the way described in these words of John de Vigo.

* It seems not generally known that Ambrose Paré himself, though using the ligature after amputations, did not use it after such operations as the excision of the cancerous mamma. In describing the extirpation of the carcinomatous mamma, he adds the resulting wound to be "seared with an actual cautery."—See his "Workes", page 287.

The latter of the two methods which he speaks of as being used by some surgeons, consisting in exposing or dissecting (*excoriando*) the upper orifice of the bleeding vessel and tying it with a ligature. The other, or first, mode consisted in passing a threaded needle under the vessel, and tying or ligaturing the vessel with the thread thus introduced. But the needle was used merely as a means of carrying and passing the thread around the vessel—the thread being left as the compressing agent, and the needle at once removed.

To comprehend this point better, let me observe that, up to the time of Paré, artery-forceps or pincers had, though previously described by Tagaultius, scarcely, I believe, been used, and much less tenacula, to draw out the orifice of the bleeding vessel that required to be tied. Before Paré's time, a threaded needle was, in consequence, generally employed, when a ligature was applied at all, to place the ligature around the bleeding vessel. Paré himself describes this as one of his well known three modes of applying the ligature in amputations. And it was employed, and recommended as late as the last century, under the name of "stitching,"* by Shaw, Sharp, Monro, Gooch, and other surgeons, in this country, and by Dionis, Garengeot, Petit, Heister, etc., on the continent. John Bell, indeed, describes, in his *Principles of Surgery* (vol. i, p. 223, edition of 1826), the "discovery which has raised Paré to a rank not inferior to that of Harvey," as "the discovery of the needle and ligature for stopping of arteries." Paré and his followers used, for the purpose of constriction of the arteries, one end of this little instrument—if we so term it—namely, the ligature; while they cut off the other end—namely, the needle—after it had performed its office of drawing through the thread. Acupressure, on the other hand, consists in inverting all this, and in using as the constricting agent the other portion of the instrument—namely, the needle—omitting the thread.

From not adverting to these essential facts in the past history of hæmorrhage in surgery, Professor Smith has been inadvertently led into the mistake of imagining that John de Vigo described compression of the bleeding vessel with a needle, or by acupressure, instead of that needle being merely used to draw under the vessel the thread by which the vessel was to be afterwards compressed or tied. Any person acquainted with mediæval Latinity, and with the history of surgery, can only, I believe, read John de Vigo's passage in this one way; namely, as a description, as he himself terms it, of the *ligatio* of the vessel.

Formerly I showed the passage to some of our best classical scholars in and out of the profession, as Professor Sharp, Dr. Andrew Wood, etc., who all read it as describing the ligature, and not the acupressure, of bleeding vessels.

Marianus Sanctus, one of the most distinguished disciples of John de Vigo, has described, in 1543, the method of taking up a bleeding vessel in accordance, apparently, with the principle and teaching of his master. In describing how a bleeding vein or vessel in a wound is to be tied (*venam ligandam*), he orders the lips of the wound to be transfixed above from one side with a needle down to the cut vein which is to be left untouched; the needle is then to be passed under the vein outwards again to the surface. In this way, says he, a loop or noose of thread can be formed around the cut vein, and, by finally tying the ends of the thread or string together, the vein and the lip of the wound are constricted.†

In John de Vigo's original Latin text there is no punctuation, as Latin works in his day were printed without points. Professor Smith, in citing the passage as given by Portal, places a comma where Portal has none, namely, after "desuper", which would give the direction of the needle, and not of the thread. Another celebrated Italian surgeon of that day (1553), Alphonsius Ferrius, in speaking of the snaring (*illaqueatio*) of a bleeding vein or artery, recommends the vessel to be surrounded with a thread, and the two ends of the thread tightly tied together; and he advises the thread to be carried under or around the vessel with a long curved needle. (See his work, *De Scelopitorum sive Archibutorum vulneribus*, lib. ii, cap. v.)

But we have a form of evidence of, if possible, a still more conclusive and incontrovertible kind that Professor Smith's interpretation is wrong;

* The most popular English work on surgery towards the end of the sixteenth and beginning of the seventeenth century, was Cook's "Marrow of Chyrurgery". After describing that "dreadful" operation, amputation of the limbs, he speaks of stanching the resulting hæmorrhage by—1, potential caustics, and 2, actual cauteries. "The third way," he contemptuously adds, is by stitching, which is almost wholly rejected. See *Pareus* for the manner (fourth edition, p. 203). After the removal of the cancerous mamma, "the mouths (says Shaw) of the larger vessels are to be stitched or sewed up" ("New Practice of Physic", 1745, vol. ii, p. 633). The first Professor Moore tells us that in Edinburgh in 1747, in amputations, "the most common practice is now to stitch the vessels." ("Edinburgh Medical Essays", vol. iv, p. 262.)

† Transfixi labrum vulnere ac in parte superiori usque ad venam incisam, eamque intactam acu reliqui, ex una parte. Deinde eandem acum deduxi sub ipsam venam, ad partem alteram, et iterum labrum ex infera ad superam partem transfixi, ita quod laqueum incisæ venæ composuimus, cujus capita bene neciendo venam cum labro colligauimus." (See the Compendium in *Chirurgia* of Marianus Sanctus in Gessner's "Scriptores Veteres", fol. 161.)

for we can appeal to the interpretation of the passage by the various translators of John de Vigo's works, and who were necessarily familiar with his style. His works were translated into English in 1550, by Bartholome Traheron, and published as "The most excellent Works of Chirurgie made and set forth by Maister John Vigo, Head Chirurgion of our tyme in Italie"; and this translation was published in 1571 and 1586. In the "Considerations in Emoragias", the translator renders into old English the Latin passage we have been discussing, in the following words. "Sometimes also it is necessarie to tye the veine, and chiefly the arterie. For when it is tied, the place is soone incarned. The manner to tye it is as followeth. You must put a needle under the veine with a cered thred, and draw it [*filum*] together softly; or else ye shal bynd the veine above, and tye the mouth with a threde." (Folio 135.)

In his well-known *Apologie*, Ambrose Paré cites various surgeons and authors who had described the tying of arteries with ligatures before his use of them in amputations. Amongst others, he states, in alluding to the preceding passage of John de Vigo, that John de Vigo, in treating of a hæmorrhage in bleeding wounds, "commands to tye the veine and the artery." (See his *Workes*, p. 1134.)

As I have already stated, Professor Smith has drawn his quotation of the words of John de Vigo, not from the original works of that author, but from a citation of them given by Portal in his *Histoire de l'Anatomie et de la Chirurgie*. Portal translates into French the passage adduced by Professor Smith. He observes that it does not appear that John de Vigo had himself tried the ligature, but "quelques-uns dit-il sont dans l'usage de lier les veines et les artères ouvertes avec une aiguille garnie d'un fil avec lequel ils resserrent les parois du vaisseau." (Tom. i, p. 624.) Of course, it is almost unnecessary to observe that the "lequel" which compressed the walls of the vessel was, in Portal's view, the thread or "fil", and not the "aiguille" or needle, or he would have written it "laquelle". Further, if Professor Smith had read even Portal's observations correctly, he would have found him agreeing in the same page that this description of the ligature of bleeding arteries with threads was as precise as anything that Ambrose Paré himself had written; and that hence the *gloire* of the invention of the ligature of arteries should be attributed to John de Vigo,—forgetting, however, as Portal here did, that Paré had himself cited Celsus, Avicenna, Guy de Chauliac, Hollier, Tagaultius, etc., as well as John de Vigo, as antecedent writers who had all mentioned the ligature of bleeding arteries and veins.

Full translations of John de Vigo's Latin work have been published in the French, German, and Italian languages. Of these no copies exist in our libraries here; but I have no doubt that they will be found to confirm the reading of the passages concerning hæmorrhage as given by Paré, Portal, and Traheron.

While thus showing that my friend Professor Smith has mistaken and mistranslated the language of John de Vigo, when he thought that that ancient author has described one form of acupuncture, let me here add, that it is quite possible, and indeed probable, that the use of the needle as a hæmostatic agent in surgical operations and wounds may yet be found in the past literature of surgery; but I repeat, I have hitherto searched in vain for such notice. Others may be more fortunate in the pursuit; and for one I shall not regret any success they may have in such inquiry.

I had not the pleasure of being present at the delivery of Professor Smith's address; or otherwise I might, if allowed, have taken the liberty of pointing out at the time the error into which he had fallen.

POISONING BY LAUDANUM.—At Leicester, on Friday week, an inquest was held on the body of a child, named James Henry Herbert. On Wednesday deceased was unwell, when his grandmother went to the shop of a man, named Peberdy, who sells grocery and a few drugs, for a pennyworth of tincture of rhubarb. She was given the mixture, and told to give the child from seven to eight drops, which she did on her arrival home. The child then fell asleep, and, as it continued to be very drowsy, the parents began to make inquiries whether tincture of rhubarb would have such an effect. The mixture was tasted, and found to contain the bitter flavour of opium. The grandmother then went to Peberdy and asked what he had given her, when he said she asked for tincture of rhubarb and he gave her it, and showed her the bottle from which he served her; but she denied that it was the same bottle, upon which he said he must have measured it in the laudanum glass. He at length discovered that he had served her with laudanum; but, instead of promptly calling in medical aid, he resorted to his own skill in medicine, and suggested the propriety of giving the child a powder and a little antimony wine, which he sent it. In the meantime a doctor was called in; but his efforts were of no avail, and the child died in the course of the evening. The jury returned a verdict of "Manslaughter" against Peberdy, and he was committed on the coroner's warrant to take his trial.

THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE CHEST.*

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It has occurred to us that a brief survey of the changes that we ourselves have witnessed, during the thirty years that we have been members of the profession, may not be unacceptable; especially if we confine our observations to one or two particular subjects. During the long period above referred to, all branches of medical science have been materially advanced, but we select for our theme one particular department, one for which we own to having a partiality, the subject of diseases of the chest. At the time when we commenced the study of medicine, it was thought that Laennec and his fellow labourers had exhausted the subject to which we allude. The stethoscope, it was said, had cleared up all that was obscure, our diagnosis with that instrument had been rendered almost infallible, and no longer could it be said as of old by Baglivi, "O! quantum difficile est curare morbos pulmonum. O! quanto difficilior eas cognoscere." Has Laennec's great discovery then effected all? Has it fulfilled all the anticipations entertained by its ardent advocates? We answer decidedly, it has not, though its indications are still to all of us of inestimable value. We can indeed distinguish by its aid and by percussion, chronic bronchitis from tubercular disease; we can follow the gradual development of the latter to its final result; we can compare the external improvement produced by remedies with that which really takes place in the lungs; we can detect the earliest signs of pericardial or endocardial affection during the progress of acute rheumatism; we can follow the accumulation or diminution of fluids in the thoracic cavity; we can diagnose an early stage of aneurism and an early stage of phthisis: but the stethoscope and percussion have not rendered us perfect either in the pathology or in the treatment of chest-disease. We may even accuse this wonderful discovery of having in some respects retarded the march of science; for the enthusiasts in its use turned their attention too exclusively to the physical signs of disease, and devoted less time than they should have done to the origin and treatment of maladies. But gradually the enthusiasm for the stethoscope died away, and auscultation assumed its true position as an adjunct to diagnosis, but not as the sole reliable means of discovering chest-disease.

Meanwhile, pathology as well as therapeutics had been undergoing a remarkable change. The old *post mortem* inspections by the naked eye, first begun by Morgagni and so fully carried out by the French school of Broussais and Andral, and by the great pathological school of Vienna, had now to give way to an improved method of examination, to the searching investigations into diseased tissue by the microscope. Histology now became the favourite pursuit; its advocates looked with scorn on the old naked eye pathologists; healthy and morbid tissues were diligently studied; wonderful theories were elaborated, reigned for a time, and disappeared, till some were heard to say that the minute analysis of tissues bid fair to increase the darkness that prevailed. But in the meantime some master minds were at work, unswayed by preconceived theories and bent only on investigating the truth. The doctrine of cell-development, so well elaborated by the great German pathologist of Berlin, Professor Virchow, was gradually brought to bear upon the mode of production of disease, and particularly was it found useful in elucidating that difficult problem in pathology, the formation of tubercle. The old French school of the commencement of the present century, the school of the solidists, always in opposition to the old humoral pathology, had ever regarded tubercle as a foreign body developed within the system by some mysterious agency. By many, tubercle was regarded as a mere local disease, and even at the present day we hear constantly the expression "abscess of the lung," as though the malady had not a constitutional origin. Virchow, however, has proved to us that true tubercle is a disease *sui generis*, produced within the lungs by constitutional causes, and formed from elements already existing there.

"It consists," says the Berlin pathologist, "of miliary masses of more or less transparent-cells containing one or many nuclei, so far resembling pus-cells as being developed like them from epithelium or connective tissue cells, but differing from pus-cells in that they do not as a rule break up into a pathological cream, capable of being absorbed; but after being massed together in the form of miliary semitransparent tubercles, they break up by a retrograde metamorphosis, beginning in the centre, into a fatty granular detritus, becoming more fully softened by inflammatory exudation from the surrounding tissues."

Much as the medical world is indebted to Virchow for having pointed out the nature of true tubercle, it is perhaps still more important

* President's Address, delivered at the Annual Meeting of the Northern Branch, June 17.