

(vol. i., p. 88.) This appears to me a very clumsy, mechanical, and unsatisfactory explanation. On the other hand, admit—what cannot be disproved—that at least the colouring constituents of the bile pre-exist in the blood, and the jaundice which results from obstruction of the portal vein receives a ready explanation. In consequence of the obstructed flow of blood there is suppressed secretion, and therefore an accumulation of biliary materials in the blood: just as from ligature of the renal artery there occurs suppressed secretion of urine.

I am decidedly of opinion that the weight of evidence preponderates on the side of those who maintain that some of the bile-constituents, like those of the urine, exist ready formed in the blood, and that jaundice may result, as Dr. Budd teaches, 1st, from an impeded escape of bile through the ducts, and its consequent reabsorption into the blood; or 2ndly, from suppressed secretion consequent on impeded circulation, or destructive changes in the secreting cells. It is probable that as the bile is in part a mere secretion and in part an actual formation by the liver, so the urinary constituents are in part formed by the kidney. This, at any rate, is rendered probable by an experiment performed by Dr. Oppler, of Berlin, who found after ligature of the ureters of a dog much more urea in the blood and muscles than after extirpation of the kidneys: and he believes that this excess is due to the actual formation of urea by the kidneys; so that they not only separate urea which has been ready formed, but they have also a large share in forming it.* With reference to this experiment, however, it would be important to know whether the dogs whose kidneys were extirpated did not die sooner than those whose ureters were tied. If so, the excess of urea in the blood and tissues after ligature of the ureters might be simply a result of the greater duration of life after the function of the kidneys had been suspended.

In opposition to the theory of the pre-existence in the blood of some of the bile-constituents, and to the theory of jaundice from suppression, it is argued that jaundice would be a more constant result than it is of extensive degeneration of the secreting tissue of the liver, such as occurs, for instance, in the advanced stages of cirrhosis.

To this argument the reply is, that jaundice in a greater or less degree is a common result of advanced cirrhosis; and its frequent occurrence in these cases, when there is no evidence of impediment to the escape of bile through the ducts, is more difficult of explanation on the hypothesis of bile-formation exclusively by the liver, than is its occasional absence on the hypothesis of the pre-existence of some bile-constituents in the blood.

The observation is common to the two organs—the liver and the kidney—that a *slow* degeneration and obstruction of their secreting tissues may reach a very advanced stage without giving rise to any of the ordinary symptoms of suppressed secretion. As cirrhosis of the liver occurs without jaundice, so atrophic granular degeneration of the kidney may reach an advanced stage without dropsy or signs of uræmia. This is partly accounted for by vicarious elimination through other organs. Biliary materials are excreted by the kidneys, urinary excreta by the liver, and both by the intestines, and perhaps in a less degree by the skin. In these cases sudden suppression occasionally happens as a result of some additional disturbing cause. A superabundant or indigestible meal causes suppression of bile and jaundice, in the case of cirrhosis. Exposure to cold induces suppression of urine, dropsy, and uræmia in the case of advanced degeneration of the kidney. In some of these cases there has been no suspicion of serious disease until within a few hours or days of the fatal termination.

It is probable that some of the cases which have been recorded as examples of *acute atrophy of the liver*—cases in which the liver is supposed to have shrunk to one-half or one-third of its original size within a few days—have, in reality, been cases in which a slow atrophy and disorganisation of the gland have been insidiously making progress long before the sudden development of the serious symptoms which have been supposed to indicate the actual commencement of the hepatic disease.

(To be concluded.)

* Virchow's Arch., Band xxi. Edinburgh Medical and Surgical Journal for October, 1861, p. 386.

LONGEVITY IN NORWAY.—The latest Norwegian census shows that there are in that country eighteen persons above 100 years of age, one of whom, an unmarried woman, living at Mo, in the Nordland district, is 107. There are, besides, thirty persons of 100 years old, of whom eleven live in that same district.

ON THE

ALLEGED ANTICIPATION OF ACUPRESSURE BY JOHN DE VIGO.

BY SIR J. Y. SIMPSON, BART., M.D., D.C.L., &c.

WHEN, some eight 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 trace of it whatever in the past records of practical surgery; for it is confessedly rare that we have ever, in modern days, operations or plans of practice 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 LANCET, however, it has been stated that long ago (or about 1516) the famous Italian surgeon, John de Vigo, has described one mode of acupressure; but the statement is 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 on Surgery which was delivered on the 8th of August by my friend, Professor Smith, before the late annual meeting of the British Medical Association at Dublin. In this address he adverts rather censoriously (see THE LANCET, p. 204) 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, &c., “clothed in all the glittering charms of novelty.” As “one example,” and, in his own words, “a most remarkable one,” he cites John de Vigo as having described the arrestment of hæmorrhage by acupressure. Professor Smith places John de Vigo in the seventeenth instead of the early part of the sixteenth century, and he gives his alleged account of acupressure in the following words:—

“He [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 intromittendo acum sub vena, desuper filum stringendo.’ Is not this the third mode of acupressure of Sir James Simpson?.....who, it is obvious, was not aware of the passage I have quoted.”

I have been long familiar with this passage concerning hæmorrhage in John de Vigo's writings. But the passage assuredly refers to the ligature of vessels, and not to their acupressure.

The words as cited by Professor Smith are taken by him at second-hand 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 perhaps he ought to have done in such a case as this, to the original work of John de Vigo, he would have found him (in his Liber de Vulneribus) describing two modes of securing bleeding vessels (in the chapter “De fluxu sanguinis et de ejus cura”), in the following words:—

“Necessarium est aliquando ligare venam presertim arteriam quia ipsa ligata locus a facili incarnatur remedio. Modus autem ligationis earum aliquando efficitur intromittendo acum sub vena desuper filum stringendo cum facilitate aut ligetur vena ipsam excoriando deinde in superiori capite cum filo optime stringatur.”—(Opera Domini Joannis de Vigo in Chyrgurgia 1525, 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 in amputations were never tied, but were always cauterised and burned.* Arteries and

* It seems not generally known that Ambrose Paré himself, though using

veins, however, laid open in accidental and slight surgical wounds, were sometimes attempted to be ligatured in the way described in these words of John de Vigo. The latter of the two modes which he speaks of as being used by some surgeons consisted in exposing or dissecting out (*excoriando*) the upper orifice of the bleeding vessel and tying it with a ligature. The other 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 or 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 (where 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 surgical wounds. 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, Garengot, Petit, Heister, &c., 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 arteries." Paré and all his followers used for the purpose of constricting the arteries one end of this little instrument (if we may so call it)—namely, the ligature; while they cut off the other end of it—namely, the needle—after it had drawn through the thread. Acupressure, on the other hand, consists in inverting all this; or, in other words, in using the other portion of the instrument—namely, the needle,—and in omitting the thread.

From unfortunately forgetting these well-known facts in the past history of hæmorrhage in surgery, Professor Smith has been led into the awkward 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 directed by him 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 names 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, and others, 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, but more explicitly and at greater length. In detailing how a bleeding vein or vessel in a wound is to be tied (*venam ligandam*), he orders the lip 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 upwards and outwards again to the surface. In this way, says he, a loop or noose of thread or string can be formed around the cut vein; and, by firmly tying the ends of this string together, the vein and the lip of the wound are constricted.‡

Another celebrated Italian surgeon of that day (1553)—

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 advises the resulting wound to be "seared with an actual cautery." (See his "Workes," p. 281.)

† The most popular English work on surgery towards the end of the sixteenth and beginning of the seventeenth century was Cook's "Marrow of Chirurgery." 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 Paræus for the manner." (4th edition, p. 203.) After 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 Monro 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 vulneris acu 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, ejus capita bene nectendo venam cum labro colligavimus." (See the "Compendium in Chirurgia" of Marianus Sanctus in Gesner's "Scriptores Veteres," fol. 161.)

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 Sclopetorum sive Archibutorum Vulneribus," lib. ii., cap. 5.)

In John de Vigo's original Latin there is little punctuation, as Latin works in his day were printed without minor points. Professor Smith, in citing the passage as given by Portal, places a comma where De Vigo and Portal have none—namely, after "*vena*." Probably, if a point should be inserted at all, it should be after "*desuper*," which would then indicate the direction of the needle, and not the direction of the thread.

But we have a form of evidence of, if possible, a still more conclusive and incontrovertible kind that Professor Smith's interpretation is wrong. For we can appeal to the reading of the debated passage by the various translators of John de Vigo's works, who were necessarily familiar with his style. His works were translated into English, in 1550, by Bartholome Traheron, and published as "The most excellent Workes of Chirurgerie made and set foorth by Maister John Vigon, Head Chirurgeon of our tyme in Italie;" and this translation was republished in 1571 and 1586. In the "Considerations in Emorosagia," the translator renders into old English the Latin passage under discussion in the following words:—"Sometimes also it is necessarie to tye the veine, and chiefly the arterie. For when it is tyed the place is soone incarned. The maner to tye it is as followeth. You must put a nedle under the veine with a cered thred, and draw it [*filum*] together softly." (Folio 135.)

In his well-known "Apologie," Ambrose Paré cites various surgeons and authors who had described the tying of arteries with ligature before his use of it in amputation. Amongst others he states, in allusion to the preceding passage of John de Vigo, that "John de Vigo, treating of a hæmorrhagie 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 an imperfect citation of the passage in dispute, given by Portal in his "Histoire de l'Anatomie et de la Chirurgie." Portal translates into French the passage cited 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. 264.)

Of course, it is almost unnecessary to observe that Portal translates the passage as meaning that the "lequel" which compressed the walls of the vessel was 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 arguing 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 regarding deligation, 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 strangely did, that Paré had himself cited Celsus, Avicenna, Guy de Chauliac, Hollier, Tagaultius, &c., 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; but of these no copies exist in our libraries here. I have no doubt, however, that they will be found to confirm the reading of the passage concerning hæmorrhage as given by Paré, Portal, and Traheron.

While thus showing that my friend Professor Smith has inadvertently, but entirely, mistaken and mistranslated the language of John de Vigo when he thought that that ancient author has described one form of acupressure, 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 any such notice. Others may be more fortunate in the pursuit, and I for one shall not regret any success they may have in this inquiry.

In my work on Acupressure (1864) I have only alluded to John de Vigo's observations on hæmorrhage as placing him in the list of those who had spoken of the ligature of vessels before the days of Paré. At one time I thought of citing the

passage itself brought forward by Professor Smith, with the view of guarding against that misinterpretation of it into which Professor Smith has fallen; and I now regret that I had not done so. But I was advised that the interpretation was too evident to be likely to lead any one into error; and besides, my book was unfortunately becoming far too large and long without any such discussions.

Edinburgh, Aug. 19th, 1867.

ON SOME DISEASES OF THE NOSE WHICH HAVE BEEN MISTAKEN FOR POLYPUS.

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IN THE LANCET of February 23rd I published a paper on Polypus of the Nose, in which I demonstrated by the quotation of cases the value of tannin in the treatment of that troublesome affection, and I there stated that it was only in the simple mucous or gelatiniform polypus that the "snuff" was of any value. I briefly showed the importance of forming a correct diagnosis in those cases of diseases of the nose, and expressed an opinion—too often proved true in practice—that any disease causing obstruction to a nasal passage is, as a rule, set down as being one of polypus.

In the following communication I propose to illustrate the subject of diseases of the nose a little further, and to demonstrate by the quotation of cases the different conditions of the nasal passage which are associated with obstruction, and which have been mistaken for nasal polypus.

The first case I shall quote is one of congenital deformity.

CASE 1. Obstruction to the nostril from deformity of the septum nasi, mistaken for polypus.—Jacob H—, aged ten, was brought to me at Guy's Hospital in October, 1860, for what was believed to be a polypus of the nose. It appeared that the boy had never been able to clear the right side of his nose completely, and that for some months the passage had been practically quite closed. He was free from all pain or other inconvenience. He had taken advice, and was told that he was suffering from polypus of the nose. On examining the nostrils, the cause of the obstruction was clearly made out. On the left side the cavity was large, and its passage clear; the septum of the nose was plainly seen to be placed far out of the median line, bulging towards the right side. On examining the right side, the passage was nearly closed, a fine probe being made to pass with some difficulty, and this only along the floor of the nose. The obstruction was evidently due to the projection of the septum nasi towards the right side, the outer wall of the cavity and the septum being in contact.

The boy had never received any injury. The deformity was evidently congenital. Nothing could be done. I might add that to the ordinary observer there was no visible deformity of the organ, the nose being quite straight.

Remarks.—This case is a type of a large class, and is very common. The simple obstruction produced by the deformity misled the practitioner into the belief that it was the result of a polypus. The knowledge of the fact that a deformed septum may produce symptoms of obstruction should be sufficient to prevent the adoption of such an error.

CASE 2. Obstruction to the right nostril, with fetid discharge from the nose, due to a deformed septum nasi, mistaken for nasal polypus.—Edward A—, aged thirty, applied to me at Guy's Hospital on Dec. 11th, 1863, for some affection of the nose. He had been under care, and had been treated for polypus nasi. For as long as he could remember he had experienced difficulty in clearing the right side of the nose, but had never thought much about it till four months since, when, after a severe cold, the discharge from that side became offensive, and the difficulty in breathing through it aggravated. When I saw him, the nose to external appearances looked natural; there was no deformity. The left nostril was healthy and quite free, but its septum was visibly pushed out of the median line. The right nostril was much obstructed from the septum nasi bulging towards its outer wall and coming in close contact with the turbinated bones. A small catheter could, however, be passed up the passage. The dis-

charge from the right side was very offensive; from the left it was natural.

Diagnosis.—The case appeared to be one of obstruction to the right nostril from the deformed septum; and the fetid discharge seemed to be due to the retention and subsequent decomposition of the muco-purulent discharge which attends a severe "cold." Acting on this opinion, I gave directions that the nostril should be well cleansed twice a day by means of tepid water and a syringe, and in one month the man was discharged cured. The deformity and partial obstruction of course remained.

Remarks.—In the case just related, a fetid discharge, or so-called ozaena, was superadded to the obstruction to the nostril. Both symptoms were, however, the result of the same cause, the malformation of the septum nasi; the fetid discharge being produced in this case, as it is in the majority of others, by the decomposition of the retained muco-purulent secretion. By simply washing out the nostril all fetor was rapidly removed; but the malformation of course remained, it being irremediable.

CASE 3. Obstruction to both nostrils from a thickening of the septum nasi after an injury.—Ann S—, aged twenty-one, applied to me at Guy's Hospital on July 10th, 1862, for an obstruction to the nose which had come on after an injury received two weeks previously. The blow was followed by bleeding, and the symptoms of obstruction gradually appeared. On examination the septum nasi was found to be much thickened, and to project far into both nostrils. The parts felt spongy, and somewhat elastic, but free from fluctuation. An inflammation of the septum nasi was diagnosed, following an extravasation of blood into its tissue. Fomentations and tonics were given. After some weeks the thickening gradually subsided, and convalescence was established.

Remarks.—This case is a type of a not uncommon class of cases, and is instructive as showing one of the results of an injury to the nose. There was, doubtless, an effusion of blood into the septum nasi, beneath the mucous covering, the direct result of the blow, and this effusion was followed by inflammatory thickening of the part, which increased the obstruction. In some examples of this form of injury suppuration subsequently takes place, and a tedious convalescence. Disease of the cartilage of the septum is another complication. I have a severe case of this now under my care, which was clearly due to an injury.

CASE 4. Obstruction to the nasal passages, due to a thickened condition of the mucous membrane lining the cavity.—William O—, aged eight years, was brought to me at Guy's Hospital on Nov. 8th, 1860, on account of his inability to breathe through the nose. The passage appeared to have been blocked up for two years, although the symptoms of obstruction had been coming on for some months previously. On making a careful examination, I found that the cavity of the nose was naturally a small one, and that the mucous membrane lining it was swollen and thickened from chronic inflammation. The two walls of the cavity, as a consequence, came into apposition, and thus caused a mechanical obstruction. A probe could be passed along the floor of the nose, and no foreign body or new growth could be made out. Tonics were given, and stimulating lotions ordered, the nose being daily washed out with tepid water. In three months a clear passage was established, and the mucous membrane became healthy. The boy was discharged cured.

Remarks.—Obstruction to the nasal passages, due to a thickened condition of the mucous membrane lining the cavity, is without doubt one of the commonest sources of error in the diagnosis of nasal polypus; for the lower turbinated bone, covered with its thickened mucous membrane, is a prominent object in the nostril of a patient suffering from this disease, and an obstruction to the passage is at the same time a marked complication of its presence. The practitioner is thus too often misled into the idea that a nasal polypus is the cause of all the symptoms. The external appearances, however, of the parts involved in these two conditions are so different that such an error of diagnosis should not be made; for the nasal polypus has usually a transparent, pale, succulent aspect, whilst the mucous membrane covering the turbinated bone is of a dull, congested, and more solid nature. It is also to be observed, on examination, that the mucous membrane covering the turbinated bone is continuous with the same membrane covering the nostril. This latter fact is readily seen, and, in doubtful cases, is sufficient to make the diagnosis clear.

CASE 5. Obstruction to the right nostril, due to the adherence of the external wall of the nose to the septum after ulceration;