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THE OBSTETRIC FORCEPS.¹

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THE obstetric forceps have accomplished as much as any one instrument toward lessening the sum of human suffering and saving human life; it is a reflection upon our profession that the history of an instrument of such importance should be so imperfectly given that the lesson which should be taught by it is almost wholly lost, for the true history of every great benefit conferred upon mankind contains in itself another good; here lies the importance of the history of medicine.

When Thomas Jefferson, at that time rector of the University of Virginia, laid upon the overburdened shoulders of Dunglison the duty of lecturing upon the history of medicine, he was perhaps wiser than he knew. That Dunglison could give us as a history of medicine but an imperfect little compend from Sprengel seems to me to be one of the great misfortunes which our science has suffered in America, for the new learning that has culminated in such a wide-spread interest in the study of the natural sciences, that has added so much of true dignity to the study of medicine, has received no adequate historical notice in this country as far as our profession is concerned.²

We cannot study the faults of our profession in the dazzling light which the science of to-day sheds upon medicine; it is only in the more subdued light of history that we can make a careful, minute inspection of medical polity. In such a light we shall find that as perfect as the science of to-day seems to us, errors do exist; that we are buffeted by chance and circumstance where we should be following a distinct, well-settled policy. To illustrate, let us consider the present awakening in the study of embryology: if we had appreciated the labors of Von Baer, Huschke, Bischoff, Valentin, Wagner, Coste, and their colaborers, would there have been need of such an awakening? Should we have witnessed the useless battles that have been waged in settling complex points in histology, like the microscopic anatomy of the cochlea, for instance, when, as Böttcher has shown us, in this very part of histology, a philosophical method of studying the development would have soon furnished us with a store of pregnant facts?

¹ Read before the Suffolk District Medical Society, February 24, 1877.

² Dunglison devotes but about fifty pages to the history of medicine since the fifteenth century; his work reminds one of the attempts at architecture that have adorned our principal cities since the beginning of the present century. The translation of Renouard is almost worthless as a history of medicine.

This knowledge of medical history is of particular importance to us American practitioners. Why do we hear so much of the lack of scientific labor that characterizes American medicine? It is not that our practitioners do not work; it is not that they are not earnest; it is not that we are a young country, — we are as old as modern science, — but it is that, in the hurry and crudeness of our national life, we have forgotten the philosophy of medicine, a philosophy that history will enable us to make our own; without which we are slaves of modes of thought, with which we obtain a clear perception of what is to be done in medicine. No one knows the character of American practitioners if he doubts that with such a perception the work of reform in this respect would be well begun.

An accurate knowledge of medical history would have precluded the possibility of the statement that the forceps were known to the Arabians in the tenth century; yet since Smellie¹ first made this statement it has been repeated by most English and American writers upon the subject to the present time. It is astonishing that Smellie, writing so soon after Chapman² had described the fenestrated obstetric forceps, could have confused the toothed instruments, the description of which he quotes from Albucasis, and which, as Scanzoni³ observes, must have caused the death of the child, with those life-saving instruments, the use of which he had done so much to base upon scientific principles. It is hardly less wonderful that Leishman⁴ could have accepted his account without making such an obvious correction. Churchill⁵ bases his statement that the Arabians knew of the forceps upon a quotation from Avicenna, found in Mulder's *History of the Forceps*, a work that I have been unable to obtain; it is more particularly to this quotation that I would call attention; it reads in Churchill as follows: —

"Oportet ut inveniat obstetrix possibilitatem hujusmodi fetus, quare subtilietur in extractione ejus paulatim; tunc si valet illud in eo, bene est; et si non liget eum cum margine panni et trahat eum subtiliter valde cum quibusdam attractionibus. Quod si illud non confert administrenter forcipes, et attrahatur⁶ eum eis; si vero non confert illud extrahatur cum incisione, secundum quod facile fit et regatur regimine fetus mortui."

If a literal translation of this passage concerning the forceps were true, our "silver-tongued" orator might borrow a fact from medicine in favor of his hobby of lost arts, but I think that it can be proven that

¹ A Treatise on the Theory and Practice of Midwifery. W. Smellie, M. D., London, 1779.

² A Treatise on the Improvement of Midwifery, second edition. 1735.

³ *Geburtskunde*. Wien, 1855, page 798.

⁴ A System of Midwifery. Philadelphia, Lea, 1873, page 449.

⁵ On the Theory and Practice of Midwifery. Philadelphia, Blanchard and Lea, 1863, page 332.

⁶ In my edition of Avicenna it reads "extrahatur." In an edition of Thomas Bartholin's *De Insolitis Partus Humani Viis*, published in 1740, he refers on page 143 to this very statement of Avicenna's, namely, lib. iii., fen. xxi., tr. ii., cap. xxviii., but he had no idea of the forceps as we know them.

he would fare here as badly as he has elsewhere in historical investigation, and at last be obliged to stand upon his merit as a reformer.

Not long ago I happened upon this old edition of Avicenna, which was printed in 1486 by Peter Maufer gallici et socior; it is the classical translation of Gerhard, of Cremona; whatever it loses in exactitude by being deprived of the corrections of an Alpagus, or in clearness by its not containing the explanations of a Rinius, is to a certain extent made up by the marginal notes of some earnest student of the "prince of physicians;" he has underlined the word *forcipes* in the passage cited, and has written an explanatory word in the margin which being deciphered reads *tenaculum*.¹

Now by turning back to the passage where Avicenna gives the *regimen fœtus mortui*,² we find that after speaking of the use of the "phlobotomos, aut cultellus spinosus, aut cultellus quo incidunt hemmorrhoides nasi" in case a hydrocephalic head presents, he goes on to say, "Si autem fœtus ex magni capitis nam tunc oportet ut findatur craneum et capiatur cum tenaliis³ quibus extrahunt dentes et ossa et extrahatur."

Then follows the treatment *cum incisione*, which is nothing more or less than cutting the fœtus in pieces, and not, as some authors have supposed, merely opening the head. It seems to me that this is sufficient to do away with the idea that Avicenna, the ruler of medical thought for six hundred years, the teacher of so many of the teachers of Europe, the writer whose works were the chief of those Arabian writings which Daremberg says destroyed the autonomy of the school of Salerno,⁴ — that such a well-known authority could have used and described our obstetric forceps and the knowledge of them could have been lost.

It is perfectly plain that no practitioner of the sixteenth century had an idea of the principle upon which Chamberlen's invention was founded; namely, that of compressing the head of the child to render it smaller in certain diameters, at the same time saving its life. Rhodion, Reuff, Paré, Fabricius ab Aquapendente, Paracelsus, and the other writers of the day make no addition to the armentarium of their Arabian predecessors. Medical historians have often stated that Reuff rediscovered the toothed forceps, but Paracelsus figured them in 1530,⁵ and Laurentius Phries⁶ mentions a *zenlein* for extracting retained

¹ The handwriting probably dates from the end of the fifteenth or the commencement of the sixteenth century.

² Lib. iii., fen. xxi., cap. xiv.

³ I don't know whether *tenaliis* is a barbarism or a misprint for *tenaculis*.

⁴ Daremberg, Histoire des Sciences médicales. Paris, 1870, vol. i., page 265.

⁵ Der grossen Wundartzney. Franckfurt am Mayn, bey Weygand Han und Georg Raben, 1536.

⁶ Spiegel der Artzney. Strasburg, 1529; first edition, 1512.

placenta. It is probable that obstetric instruments have been slowly yet steadily improved upon since the time of Celsus. The history that presents us with ideas of sudden revolutions in knowledge is always suspicious; it too often proves to be the fact that our ignorance causes the hiatus that seems to exist.

We all remember that it was thought, but a few years ago, that the present condition of the earth's surface was due to great convulsions by means of which mountains were thrown up, valleys excavated, and coast-lines changed; Lyell taught us that the daily action of lesser forces was accomplishing these immense changes under our very eyes; that which Lyell has taught us in inorganic nature Darwin is teaching us in organic nature, and what is true in both places applies as a general law, it seems to me, in the history of mankind.