

## Historical and Bibliographical Notes.

A SERIES OF SKETCHES OF THE LIVES, TIMES AND WORKS OF THE OLD  
MASTERS OF ANATOMY AND SURGERY.

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X.—GUY DE CHAULIAC.

1300—1370.



THE profound gloom of the dark ages was just beginning to yield to the glimmering dawn of modern intellectual light, the long struggle of Christendom against Islam was practically over, Feudalism was on the decline, and the formation of distinct nationalities had already commenced when Guy de Chauliac, the restorer and reformer of surgery, was born.

Neither the precise time of his birth or death is known. It is quite probable that he was born in the last years of the thirteenth or in the very commencement of the fourteenth century. He was a native of the little town of Chauliac, in the diocese of Mende, in Gevandan, on the frontiers of

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Auvergne, in France. It was from the name of this town that his chief cognomen was derived. The name is variously written, Gui de Chaulien, Guy de Chauliac, Guido de Cauliaco, or simply Guido, or Chauliac.

Before proceeding further, I will pause to call the reader's attention to some of the more notable immediate predecessors and contemporaries of Guido in that far-off age—well nigh six hundred years ago. The immortal Dante was still living when Guy was a young man (d. 1321). Chaucer, the father of English poetry, was born in 1328 and died in 1400. John Wyckliffe was living and translating the Bible into English at the same time that Guido wrote his "Grande Chirurgie." Froissart, the celebrated French chronicler, was then actively scribbling the minute details of passing events (1337-1410). Francisco Petrarca, the Italian scholar and poet, was Laureate at Rome (1304-74). Boccaccio, the author of "Decamerone," was another contemporary of the great surgeon.

At this time France was under the rule of Philip IV., V. and VI., while Edward I., II. and III. were the sovereigns of England. It was at the court of the latter that the splendor of chivalry was carried to its highest degree of grandeur. The papal chair had been removed by Clement V. to Avignon, where it remained about seventy years, being returned to Rome in 1376. "Guy le bon docteur" had the honor of being the physician of three successive Popes—viz.: Clement VI., Innocent VI. and Urban V., between the years 1340 and 1370.

Immediately preceding the birth of Guy de Chauliac, flourished Albertus Magnus, Friar Roger Bacon, Petrus de Apono, Arnoldus de Villanova, and his friend, Raymond Lully, all celebrated astrologers, alchymists and physicians. Then also flourished the famous surgeons, Brunus, of Calabria; Theodoric, Bishop of Cervia; Gulielmus de Saliceto,

Professor at Verona; and Lanfranc of Milan, who was professor in the University of Paris, and author of a treatise on surgery written in 1296.

Bernardus de Gordonio, author of "*Lilium Medicinæ*," was Professor of Medicine at Montpellier in 1285, where he taught for a third of a century, and died about the year 1320. Gordon is referred to by Guido, who in certain cases recommended the practice laid down in his *Lily of Medicine*. John of Gaddesden, the first court physician ever appointed in England, the author of "*Rosa Anglica*," who is referred to by Chaucer in his "*Doctor of Physick*," was born about the same time as the subject of this sketch. Guy refers to the work of John, but not, however, in a very complimentary manner. "Last of all arose the scentless Rose of England, in which, on its being sent to me, I hoped to find the odor of sweetness, but instead of that I only encountered the fictions of Hispanus, of Gilbert, and of Theodoric."

Mundino, or Mundinus, of Milan, was Professor of Medicine at Bologna in 1315, in which year he wrote his little treatise on anatomy. He was the earliest dissector in modern times, having dissected three human females between the years 1306 and 1315. His treatise enjoyed so great a reputation that for over two hundred years it was the authoritative text-book in all the medical schools of the Italian Universities. It was first printed in 1478, and will always be highly esteemed as an historical monument representing the state of anatomical knowledge in its infancy. Mundinus died in 1326, and though a contemporary, it is not certain that Guido ever saw him or listened to his teachings.

The general education of Guido is presumed to have been very thorough for the times in which he lived. Most assuredly, his professional education and training must have been the best possible in that age. He tells us, in his works, that he followed the course of the Faculty of Paris; that he

studied at Montpellier under the great master Raimond de Molières, where he made such rapid progress that a few years later he was appointed to teach surgery in its university. Also that he attended the lectures and demonstrations at Bologna, where he not only saw, but assisted, Nicolas Bertrutius, or Bertruccio, dissect the human cadaver. Thus it is seen that Guido imbibed his learning from three of the most renowned Universities then in existence—Bologna, famous for its anatomical teachings, Paris for surgery, and Montpellier for medical science.

The condition of medicine in Europe previous to this time was low, inactive and crude. The chief sources of knowledge were the works of ancient medical writers; indeed, not all of these were yet known, being such as were not the originals but the Arabic translations, imperfect, erroneous, and more or less interpolated. The writers of that day were content with copying from those works, and making commentaries which seldom contained any original cases or observations, being confined within the narrow limits in which subserviency to authority and established methods had so long and firmly bound them.

Towards the end of the thirteenth and the beginning of the fourteenth century, previous to which medicine alone had been cultivated by the Faculty, all the translations of the early writers on medicine were gathered from Italy, and new versions of the Arabian writers were now being produced from the originals obtained from the libraries of Spain. The schools of Salernum and Bologna yielded their treasures, and finally their prestige, to that of Montpellier, which had no rival but the school of Paris. This Faculty had been aroused to the importance of surgery by Lanfranc of Milan, who had been called to Paris; it was, however, far inferior to Montpellier in the science of medicine. The latter had the books of Constantine, all the books of Gérard of Cre-

mona, all the versions made by the order of the Emperor Frederick. Many works of Galen had been obtained from the Emperor Andronicus by Robert. Charles of Anjou had sent to the King of Tunis an embassy expressly to obtain the *Continent* of Rhazes, till then unknown in Europe. The library of Montpellier was rich in the classic literature of medicine. There were to be found all the works referred to by Bernard de Gordon, who wrote in 1303. Guy de Chauliac possessed eighteen Arabian authors, some of which are not now extant. He had the most complete collection of the surgical writings of the Middle Ages that was ever gathered together, many of which are cited only by him. At this time neither Celsus the Roman, nor Aetius the Greek, seem to have been known to any of the scholars of the West.

Having thus acquired the principles and groundwork of his profession, and stored his mind with erudition gleaned from such vast resources, he next travelled through foreign countries, the better to prepare himself for the practice of his art. He spent several years at Lyons, where he became very celebrated, and finally settled at Avignon, where, as above stated, he was patronized by the Roman Pontiffs.

From 1346 to 1348 nearly the whole world was desolated with the plague; millions of human beings died; in some places but a small percentage of the population survived. It raged with fearful malignancy at Avignon for seven months in the year 1348. Guido stood manfully at his post of duty; his unwearied zeal in a measure overcame his fears; he followed the example set by Hippocrates, long ages before, in the Isle of Cos. In his simple yet very frightful account of this epidemic, Guy says the demoralization was general. The physicians were among the first to flee; even the best surgeons did the same. Guy denounces their conduct and calls it shameful; as to himself, he feared such infamy more than the pestilence. He does not boast, but

declares that he lived in constant fear of the disease with which he was at last attacked ; he was laid very low for six weeks, having a continual fever, ending in an axillary bubo or abscess. His recovery was despaired of by his colleagues, yet he was finally restored to health.

The Pontiff Clement VI. rewarded him munificently for his service, and Innocent VI., his successor, also appointed him his physician, and treated him with distinguished consideration.

He was still in Avignon in 1360, in which year the plague returned. In 1363 he wrote his "Grande Chirurgie," after which his personality is lost sight of, and even the place and time of his death, and the spot where his remains were resolved to earth, are alike unknown.

As Mundinus was the restorer of anatomy in the fourteenth century, so Guido was that of surgery at the same period. Previous to his time it was a miserable art, practiced chiefly by men of gross ignorance, being the acknowledged perquisite of barbers and itinerant quacks. Guy was the first to reduce the art of surgery to a system, and to manifest a spirit of independent criticism. He composed his "*Inventarium, sive Collectorium Artis Chirurgicæ Medicinæ*," in the year 1363. He was then ripe in years, possessed of immense erudition, of ample experience, of mature judgment, of nobility of mind, and of singular purity of principles. Of the latter, we have the proof in the following extract from the introductory chapter of his work:

"The surgeon should be learned, skilled, ingenious, and of good morals. Be bold in things sure, cautious in dangers ; avoid evil cures and practices. Be gracious to the sick, obliging to one's colleagues, wise in his predictions. Be chaste, sober, pitiful and merciful ; not covetous nor extortionate of money, but let the recompense be moderate according to the work, the means of the sick, the character of the issue or event, and its dignity."

Malgaigne, to whose introduction to his edition of the works of Paré I am much indebted, exclaims: "Never, since Hippocrates, has medicine heard language filled with so much nobility, and so full of matter in so few words."

Guido's surgery was the acknowledged authority in Europe for not less than two centuries. Fallopius compares him to Hippocrates, being the first since his time to give principles to this art. Guido quotes numerous authors, upon whom he makes critical observations and judicious animadversions. Indeed, his work contains an excellent historical sketch of surgery down to his own epoch. He starts out with the sound doctrine that a knowledge of anatomy is essential to both the physician and surgeon; that without it they only grope in darkness. His surgery, accordingly, is commenced with a brief anatomical treatise—first, treating "on the common parts, universal and simple;" the second, "on the nature of the special parts, individual and compound." He sees but seven pairs of cranial nerves, and counts thirty spinal nerves, two hundred and forty bones, without the hyoid and sesamoids. He describes three ventricles in the brain, to each of which he assigns special functions. In my copy of "Guido, his Questionaries of Chirurgie," Geo. Baker's edition, London, 1579, I find the following:

"Question. How many celles hath the brayne after his length, and how many parts in each ventricle, and how many and what vertues taketh their origine in each parte?

"Answer. First, the braine in length hath three ventricles, that is to say, the ventricle afore, that behinde, and that in the middes, and the anteriour and meane, each is devided in two parts. In each part one vertue taketh his origine. In the first part of the ventricle before is put the common bloode. In the second, the vertue of imagination. In the middle ventricle is put the cogitative and rationall. And in the hinder ventricle is put the vertue reservative or memorative."

The spirits were presumed to pass from one ventricle to

the other through the *iters* of communication. He says the optic nerves are united but do not cross each other.

In making incisions for inflammation or abscesses he laid down the maxim to cut in the direction of the muscular fibres. He showed much wisdom in the classification of wounds and their treatment. His remarks on wounds of the head are very practical. "If they are well treated they will be healed; thus I have seen the posterior part of the brain, from which a little of its substance had issued; this was followed by damage to the memory, which he regained after his recovery." "Of the liver I have seen small wounds heal, but they were not deep nor with loss of any substance, as Galen testifies."

Guido practiced most of the operations which are done to-day. In cases of collections of pus in the chest he did not hesitate to let it out. His superior anatomical knowledge here served him and led him to modify the methods of his predecessors. He took exception to the counsel of Guillaume to make the incision between the fifth and fourth rib, and says:

"Inasmuch as the diaphragm is reflected where it touches the spine and ribs, even as high as the third rib and higher, and this reflection might hinder the escape of matter, and make the operator believe that he had not made his incision deep enough, it is better that it be done between the third and fourth ribs."

He treats of hernia in detail, lays down rules and precepts for the diagnosis, prognosis and treatment. In strangulated hernia he resorted to bleeding, the taxis, in extreme cases to incisions, the cautery or to caustics. The parts were supported by the use of the truss. He resorted to one method to strengthen the relaxed parts, which was more ingenious than practical. The patient was to take a scruple of iron-filings with urine, then a large magnet was applied to the



seat of the rupture, by which it was presumed that the particles of iron were attracted to the part and thus increased its tone. This remedy had been imparted to him as a great secret. The radical cure of hernia involved the destruction of the testicle, either by ligature, the actual cautery, or by caustics. The latter he preferred, as he had seen it used successfully by his master, Petrus de Bonanto, in no less than thirty cases.

He treated fistula-in-ano by much the same means now employed—viz.: by passing several threads from without inward by a flexible needle, which he brought out through the anus, and divided everything included in the loop. He operated for cataract by depression. John of Luxemburg, King of Bavaria, being blind with cataract, took occasion when at Avignon with the King of France, towards the end of 1336, to consult Guido, who wrote out for the Bavarian king a treatise on regimen which he was to follow, but for some reason declined to operate upon his august majesty. John remained blind, and was so still in 1346, at the fatal day of Crécy, where, being determined to engage in battle, his squires tied his bridle reins to theirs, and then, with sword in hand, the heroic old man rushed into the thickest of the fight, where he met the same sad fate that befell so many valiant knights who, on that memorable twenty-sixth day of August, fell before the sturdy English yeomanry of Edward III.

Guido revived the use of the trephine. He is the earliest surgical writer who speaks of the Cæsarean operation, which he advised to be resorted to only after the death of the mother in order to save the infant.

Portal (*Hist. de l'anat. et de l'chirurg.*, v. 1.), from whom I have obtained much assistance in the preparation of this sketch, says: "Finally, it may be averred that Guy de Chau-liac had said nearly everything which modern surgeons say,

and that his work is of infinite price, but, unfortunately, too little read, too little pondered. He described many instruments, among others a forceps for the ligation of arteries." Hence it is seen that ages before Paré was born this practice had been adopted.

Is it time wasted to take a retrospective view of the progress of our art?

The works of Guy de Chauliac have appeared in many forms and in numerous editions. They have been abridged, commented upon and translated into nearly all the languages of Europe, and yet at this time a copy of almost any edition is rarely to be found in any of the antiquarian book stalls of Europe. The writer prides himself on the possession of a fine copy of the folio edition, from the text of 1363, *apud Octavius Scotum, Venetiis, 1498*, which is the earliest edition referred to by Haller. In the same volume are also published the works of Brunus, Theodoric, Roger, Roland, Bertapalia and Lanfranc. Also in the possession of a copy of George Baker's corrected English edition of "Guido's Questionaries of Chyrurgerie," small quarto, London, 1579. Guido's surgery was published at London, in folio, 1541, of which Baker says:

"I have taken some paines in an olde booke beeing brought to me by the Printer, called Guido's Questions, desiring me to have it corrected. In the which Cobby I founde Imprinted, ill-distinct, and in many places whole lines left out, so that I could not make a perfect worke except it had bene new made, and the olde phrase altered, the which I durst not do; for beeing before imprinted, many have the booke, and woulde thinke it a great presumption in me to alter it so much as it had neede off, and especially being of so excellent a Doctor's making as Guido was. Therefore I shall desire all those that shall see it, not to condemne me, though you shall read some evil phrases in it. For I am sure it is amended in a thousand places." \* \* \*

To this edition Baker has inserted "A prayer necessary to be sayde of all Chirurgiens."

Hamilton says a copy of the English edition of 1541 yet remains in the British Museum.

*Chirurgiæ tractatus septem, cum Antidotaris*, Venetiis 1490, fol.; 1498, fol.; 1500, fol.; 1506, fol.; 1518, 4°; 1519, fol.; 1546, fol.; 1559, 8°; 1572, 8°. In Spanish, Valence 1596, fol.; Lugduni 1559, 4°; Lyon 1518, 4°; 1547, 8°; 1559, 8°; 1569, 8°; 1572, 8°; 1579, 8°; 1585, 4°; 1592, 8°. *La grande chirurgie*, Rouen 1615, 8°; 1659, 8°; Bordeaux 1663, 1672, 1683, all 8°; Paris 1539, fol.; 1543, fol.; 1643; Franckfort 1574, fol.; London 1541, fol.; 1579, 4°. *Le guidon de la pratique de chirurgie pour les barbiers & chirurgiens par Gui de Chauliac*, Lion 1485, 4°; Paris 1571, 16°. *Le guidon en François de Maitre Jean Falcon*, Paris 1484; Lion 1520, 4°; 1559, 4°; 1649, 8°. *Dictionarium vocum Guidonis, Isaacus Joubert Laurentii*, Veneta 1491, fol.; 1537, fol. *Laurentii Joubert annotationes sur la chirurgie de Gui de Chauliac*, Lion 1659, 8°. *Le chirurgien methodique*, Lion 1597, 12°. *Fleurs de Guidon augmentées de la pratique de chirurgie & de plusieurs expériences par Meissonier*, Lion 1673, 12°; 1693, 12°. *J. Raoul fleurs du grand Guidon*, Paris, 16°; Rouen 1676, 12°. *J. B. Verduc le maitre en chirurgie, ou l'abrégé de la chirurgie de Gui de C.*, Paris 1708, 8°; 1716, 8°. *Introduction de la chirurgie par Jaques de Marque*, Lion 1580, 8°; Italice 1596, 8°.