

CLAUDIUS GALEN—THE GRAND OLD MAN OF PHARMACY.

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In casting about for the grand old man of pharmacy, it became increasingly evident that the final choice of just one man for that honor was well-nigh impossible. For example, to select an individual of the present day and say arbitrarily that he had done more for pharmacy than any other one man in the past twenty years would be an extremely difficult task. It would require deep diplomacy, rare tact, searching inquiry and a most delicate weighing of achievements; for there are a number of men who, to-day, are active workers in pharmacy, each functioning as the godfather of a particular branch of our profession, each doing unusually fine work in his chosen field, and whose efforts must each be considered of equal value when put together as a part of the whole.

If, however, we confine our search to the earlier periods in the history of our calling and leave the heroes of the present generation for the historians of the future, the task at once becomes easier. In the dim shadows of the past there stand out here and there, with diminishing frequency as we probe farther back toward the beginning of pharmacy as an "art," men who were the dynamic forces of their day in the advancement of this so-called "art."

Outstanding among these characters is the subject of this sketch. For the period he has no peer. That he is firmly entrenched in pharmaceutical history will be evident from the following quotation: "For convenience in teaching, we group pharmaceuticals into two classes—galenical preparations and chemical preparations." This excerpt from a widely-used text on pharmacy illustrates the lasting influence of one Claudius Galen on the Art of the Apothecary.

All of us have studied the many preparations called "galenicals" in whose manufacture no chemical reaction is involved, and know that they were named after Galen, an ancient authority on pharmacy and medicine, yet we did not fully realize just what manner of man he really was, nor how fitting it is that his memory should be so honored to-day. We were not made acquainted with one of the most remarkable characters in the history of science, who, through his ceaseless mental and physical activity, brought medicine and pharmacy out from the deeper shadows of the supernatural where they had returned at the death of Hippocrates, and who placed them once more on a rational foundation. So thorough was he in his studies, and so efficiently critical in the collection and compilation of knowledge, that his writings on medicine and pharmacy were accepted for centuries as the chief authorities.

This indefatigable seeker after scientific truths was born in the city of Pergamum, capitol of Mysia, in Asia Minor, only a hundred and thirty years after the death of our Savior. He began his education as did any other youngster of his time, but probably rapidly outstripped his classmates, for history tells us that at an early age he was familiar with the profound philosophies indulged in by the learned members of the Stoic, Peripatetic, Platonic and Epicurean school of thought. That was no small mouthful in those days for even the most intellectual of his elders.

Galen entered the medical school of Pergamum when he was sixteen. As the city had an excellent library created by the Attalid kings, he undoubtedly made

a pest of himself during the hours between classes bothering the librarians for books. The young man pursued his studies here until 148 when he left for Smyrna in order to attend the medical lectures of Pelops, a celebrated physician.

Leaving Pelops, it appears that Claudius spent the next few years travelling from country to country following the will-o'-the-wisp of knowledge throughout Cilicia, Greece, Crete, Phœnicia and Palestine. By his studies and travels, he soon gained a high reputation as a surgeon.

Whether wandering lost its glamour for him, or all the sources of information had been visited and drained of their facts, or whether he became lonesome and homesick is not known. Regardless of the reasons, Galen returned to the place of his birth in 158 and accepted the post of physician to a school of gladiators. He was probably overjoyed to take up his new duties. Dissection, except on the lower animals, was prohibited; consequently, his knowledge of the principles of surgery was vague. Here, at last, was an excellent opportunity to secure such experience and still be within the law. Gladiators were in frequent need of surgical treatment.

Just as in the twentieth century the lure of the larger opportunities in the big cities casts a spell over the more ambitious of the younger citizenry, so it was in the days of Galen. He, too, yielded to the beckoning of Fortune and moved to Rome in 164. His success as a practitioner was rapid. It was but a short time until he began mingling with the high Roman officials and numbering among his patients many of the aristocracy. His lectures and clinics were well attended by the more famous men in his profession. Here, too, he conducted what was probably the first apothecary shop to sell drugs exclusively.

This success, coupled with the fact that Galen had no patience with those who adhered to the various medical sects, made him many enemies. These he flayed with an unmercifully caustic pen and tongue, at the same time making wicked editorial jabs at the methodists, empirics and dogmatists. Galen himself belonged to no particular school, nor could he conceive of any other clear-thinking man loading his mind with dogma.

Some undetermined motive caused him to give up his excellent practice and return again to Pergamum. Some writers attribute this sudden departure to Galen's lack of courage in the face of the frequent epidemics and plagues of those days. They feel that he was afraid of contracting one of those dread diseases during its siege of Rome.

He was not destined to remain at home for long, however, as Marcus Aurelius called him back to serve in the Germanic wars. Later he evaded this duty by going to Rome as the personal physician to Commodus, the young son of the Roman general.

From this point in Galen's career, history is vague. We are relatively certain that he was still lecturing during the reign of Pertinax, that many of his works were unfortunately destroyed by fire in 191, and that he was in the employ of the Emperor Severus near the end of the second century. Practically all of the writers are agreed that he died in Sicily about 200 A.D. after living the Biblical three score years and ten.

So ended, in obscurity, the life of a truly great man, as is so often the case—the world not being particularly interested in his passing. But the world was not destined to forget so easily his monumental offerings to the deity of Progress. When

it wanted information on medicine his books were consulted; when it wanted knowledge of pharmacy his writings were studied; when it wanted direction in religion and philosophy his treatises were the guides. His masterly dissertations even covered the fields of ethics and grammar. In all, he is supposed to have been the author of around five hundred treatises and books, many of which have been translated into other languages. Eighty-three of these works which are recognized as genuine, and some others probably spurious, are still preserved in European libraries.

To delineate briefly Galen's medical and pharmaceutical achievements, he was the founder of experimental physiology and was a skilled research worker in anatomy. Most unusual for that time is the fact that he recorded and described only what he actually saw. His contemporaries were prone to imagine a great many things and to describe these figments of fancy in detail as though they actually existed, but not so with Galen. It is true, nevertheless, that he, in common with the other anatomists of the time, held some peculiar hypotheses regarding the functions of the various parts of the body, but there the resemblance stops.

Galen's investigations were made mostly on the lower animals. According to one authority, he recognized the lacteal vessels and described the ducts of the lingual and sub-maxillary glands, being unaware, however, of their function. He knew of insensible perspiration, and had ligatured the recurrent laryngeal nerve and noted the results. His description of the heart with its three layers of fibre, which he hesitated to call muscle because of its unusual characteristics, was accurate, as was the account of the valves of that organ. One of the outstanding results of Galen's research was definite proof that the arteries carried blood and not air, thus exploding the theory that the Alexandrians had been expounding for centuries.

In pharmacy, Galen left us his very long list of vegetable preparations, or simples, and thereby unwittingly engraved his name permanently in our roster of manufacturing pharmacists. It must not be believed, however, that because Galen introduced a vegetarian type of medicine he knew of no other therapeutic agents. Quite the contrary. He was adept in the use of earths or clays and the fumes of minerals, especially, according to LaWall, of orpiment. This author claims, too, for Galen the honor of originating our present-day "cold cream," or rose water ointment. He also believed in amulets and spiritual cures. Cullen states that the famous anodyne necklace is the result of this faith in the occult. It seems peculiar to some that a man possessed of as much hard common sense as was Galen should believe implicitly in the healing power of charms. Nevertheless, this error in therapeutics was minor when compared with the progressive results of Galen's activities.

Galen has been criticized in very derogatory terms by a few of his successors and by compilers of historical data who feel that because of the intrusion of spiritualism in his materia medica and because many of his orthodox prescriptions were worthless and built up utterly without rhyme or reason, he must have been considerable of a fakir. They forget that Galen was living in an age when everybody accepted the supernatural as the most plausible explanation of things they did not understand. Disease, illness and misfortunes of all kinds came and went, according to the people of that time, in a mysterious, preternatural way; therefore, only mystical charms and black magic could combat them. What is more natural for a

simple people? Our illiterate and uninformed of to-day respond in a large degree to such psychology. It would be extremely hard for even the most advanced genius of that age to throw off completely the yoke of superstition. Galen displayed more than ordinary mental resolution to diagnose and to attempt cures in a reasonable fashion. The critics disregard, too, the fact that therapeutics was not a science in 130 A.D. Consequently, Galen working in the dark, pioneering the field and being only human, reacted to many of the fabulous ideas then prevalent regarding the medical virtues of certain things. Notwithstanding, his works were sufficiently in advance of his time to be considered as authorities in schools of medicine and pharmacy until the fifteenth and sixteenth centuries.

It is not possible in a paper of this kind to present an extended dissertation on the qualities and accomplishments that made Galen the figure in history that he is. But one more thought in closing; how many scientists of to-day, had they been working in Galen's time with practically nothing in the way of absolute knowledge or facilities for research, and being opposed at every turn by narrow, prejudiced and antagonistic schools of thought, would have accomplished even a small fraction of the things Galen did, and would have made for themselves reputations which would survive centuries upon centuries? What more fitting, then, than that he be called "The Grand Old Man of Pharmacy?"

GALEN.

The bust of Galen (?) shown herewith comes indirectly through "Pettigrew's Medical Practice" and is traditionally credited with being that of Galen. The history in brief is, that the bust was presented to the Royal College of Physicians (Great Britain), by Alexander Adair, principal surgeon to the British forces at the siege of Quebec. Biographical references to Robert Adair state that he was a man of considerable eminence in his profession, a man of character and a scholar. This is as near to an authentic statement that we can make.

Wooton, in his "Chronicles of Pharmacy," states that Galen is sometimes said to have kept a pharmacy in the Via d'Acra at Rome, his apotheca. There appears to have been a house where his writings were kept and where other physicians came to consult them. This house was afterwards burned, and it is supposed that a number of the physicians' manuscripts were destroyed in that fire.—E. G. E.

