



GALEN'S WRITINGS AND INFLUENCES INSPIRING THEM

By JOSEPH WALSH, M.D.

PHILADELPHIA

PART V

Galen the most brilliant medical man of the age arrives in the Imperial Capital about January 163 during the reign of the Co-Emperors Marcus Aurelius and Lucius Verus and remains three years. He rents suitable quarters and sets about sight-seeing, study, medical practice and the promulgation of his valuable discoveries in anatomy and physiology. Impressed by Eudemus, an old peripatetic, he adopts him as preceptor. The first year passes without special incident, although he is gradually becoming known. At the beginning of the second, his preceptor falls ill with quartan fever and in his anxiety to aid, Galen arouses the hostility of two prominent physicians, consultants on the case. This represents the beginning of the antagonism of not a few Roman medical men and their followers. During the illness he becomes acquainted with a number of Eudemus' intellectual friends occupying high public office in this popularly dubbed government of philosophers. Details of his treatment of Eudemus to show his over-confidence and how it created offense.

GALEN arrived in Rome at the age of thirty-two (xviii, 347)¹ after studies in philosophy and philology second to none, with an education in mathematics, particularly in geometry, that suggested it had been stimulated by the work of the towering Ptolemy recently deceased, and with personal discoveries in anatomy and physiology that made him the most advanced medical scientist of the age. We know that he had already studied these subjects

under eminent teachers in Pergamum, Smyrna and Alexandria,² and have reason to believe that on his two visits to Greece he had become acquainted with the writings, and possibly with the teachers themselves in Athens and Corinth. He thus knew how his knowledge compared with that of his contemporaries in the Eastern half of the Empire. This was, however, his first visit to the great capital whose size, beauty, art and architecture, fabulous riches, enlightened senators, brilliant philosophers and rhetoricians and advanced medicine were well-known. He came primarily with the idea of broadening his education, but must also have felt that he, too, had promulgations of value.

He found Rome governed by officials of a culture and integrity higher than had before fallen to the lot of a large city with that most conscientious of rulers, the saintly philosopher Marcus Aurelius, at their head. About him in many of the public offices were philosophers who had been his teachers or intellectual intimates. Stoics in thought and manner of living, they were also deeply read in the writings of Plato, Aristotle, Democritus and Epicurus. Stoicism, as elaborated by Chrysippus, was their religion; on Plato's Timaeus they based their biology; on Empedocles' four elements (fire, water, air and earth) their chemistry; from Aristotle they derived logic and principles of research. And these subjects were under-

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stood by none better than the young Pergamite just beginning his sojourn in Rome.

The Prefect of the city, an officer somewhat akin to Mayor, was Junius Rusticus, the redoubtable disciplinarian and stoic philosopher, who still treated the Emperor as a pupil.³ A year later when Galen was demonstrating his remarkable physiological discoveries, Claudius Severus, another highly regarded peripatetic and teacher of Marcus, was Consul (xiv, 613). Our estimate of these men is taken, and we believe justifiably, from their description in the "Meditations." Yet Galen, too, lauds some, for instance, Sergius Paulus, a later Prefect of the city, whom he describes (II, 218) as conspicuous for his knowledge of public affairs and philosophy. This selection of the cultured and honorable extended even to the Army in which the Quintilian brothers could be found as head of the forces on the German frontier.⁴ Grandnephews of the celebrated rhetorician, these two brothers were noted for their education and uprightness in spite of great wealth and an immense estate four miles out on the Via Appia. This remarkable administration of public affairs existed not only while Marcus was secretary to Antoninus Pius, but for the additional nineteen years of his own reign.

It is not surprising then to learn that six years later (on his second visit to Rome) our pious, brilliantly educated Pergamite was inducted into the office of physician to the eight year old son of the Emperor. The fact that he was, undoubtedly, the most eminent medical man of the time, and one of great integrity, adds to the likelihood that the other appointments of Marcus Aurelius were in the same category, particularly since the majority of the appointees were personal acquaintances of long

standing, while Galen was from the distant east and had been under his eye only three years. In other words, it was during a period of highly developed education when Rome was giving to the world the art of government and the beginnings of modern law, that Galen was adding his share in the way of increased knowledge of anatomy and physiology.

In spite of this approach to perfection in government Plato's ideal Republic had not yet come into being. As in all large communities there were at least some persons innately unscrupulous and hypocritical, and among the younger public officials were others who were followers of the Co-Emperor Lucius Verus and his rowdy associates. These lived boisterously as *bon vivants*, corresponding to the Pergamite's description of medical students in his work on Therapeutics written in 174 A.D. (x, 1 *et seq.*), and jested about the honesty and sincerity of Marcus' older friends.

It is generally conceded that one of the errors of Marcus Aurelius was his acceptance of Lucius Verus as Co-Emperor, yet it was an error on the side of ideal rectitude, and so to be easily forgiven. The first intention of the Emperor Hadrian was to leave the throne to Lucius Commodus, Lucius dying, Hadrian willed it to Antoninus Pius on condition that he should transmit it to Marcus Aurelius and Lucius Verus, the son of Commodus. This son displaying traits making him unworthy of the high heritage, Antoninus was desirous of leaving the Imperium to Marcus alone. Marcus, however, refused and insisted on Hadrian's wishes being carried out, thus putting Lucius Verus in a position equal to his own.

Lucius who was at the time thirty-two, fond of roystering and boon com-

panions, left the matter of ruling entirely in the hands of the older man, and devoted himself to dining, wining, sports, and games. As secretary to Antoninus for over twenty years, Marcus took from the shoulders of the Emperor much of the routine of administration, and achieved for himself a position of the highest respect. But his extreme rectitude and undeviating virtue were beginning to pall, and not a few of the more lively spirits of the capital were more than a little pleased to have someone of their own temperament in an equally high position. To these adherents were added others not so honest who gathered round Lucius because he was the younger and more likely to be the eventual sole ruler. Marcus was forty-two and rather delicate, Lucius thirty-two and robust. Marcus might die at any time; Lucius appeared to have an assured life of many years. Marcus' appeal was to the upright and intellectual; Lucius' to the sensualist, the lover of games and shows and the crafty politician, ambitious for power.

Despite his brilliant education, Herodes Atticus, the multimillionaire Athenian rhetorician who was for a short time a teacher of Marcus Aurelius, made a special play for the interest of Lucius; despite the honesty we attribute to the atheistical satirist Lucian he went out of his way to gain his influence by a fulsome eulogy of his mistress.⁵

At the time of Galen's arrival in 163, Lucius Verus was in the East as Commander-in-Chief of the armies fighting against Parthia. He died six years later while Galen was accompanying the Co-Emperors from Aquileia to Rome after the Pergamite had been in their train only a short time.

Of his first year in Rome Galen has little to say; during the second we can

follow him almost month by month, and oftentimes day after day as he treated the philosopher Eudemus and other patients, promulgated his discoveries, discussed anatomy and physiology with his newly made friend, the consular Boethus, as well as with belligerent adversaries, and wrote book after book for pupils and admiring acquaintances. From the meagre account of the first year, however, we know that he rented a house or apartment for which he purchased at least some of the furnishings (xiv, 648). This abode was large enough to accommodate when necessary one or more sick (xi, 300) whom he wished under personal control. He also began practice and before the end of the year was active in the public discussion of anatomical problems (xix, 13).

His intention was to remain in Rome until the termination of the Parthian War (xiv, 622) and then return to Pergamum to proceed with his anatomical research. As campaign reverses or the death of the Parthian commander, Vologeses, might bring this about at any time he began at once to visit the buildings, squares, art treasures and amusement places, libraries and book-stores. He made the round of the medical and philosophical teachers and attended meetings in the Temple of Peace where physicians congregated for the discussion of problems, presentation of papers and to consult its splendid scientific library. Since it was not his nature to sit quietly by while others talked, it is difficult to imagine him not participating, yet it is only late in this first year that the Roman physicians appear to have begun inquiries as to his origin, education and opinions. From the beginning of the second year we know that he practiced actively, and as no license was necessary he probably started shortly after arrival. He practiced both medicine and

surgery until he learned that this was contrary to Roman custom and looked upon askance. He states that he then gave up the latter (x, 454), though it appears that during the reign of Commodus (the son of Marcus Aurelius), he had some association with the arena, possibly by command of the Emperor.

In his new quarters Galen found himself a near neighbor of Eudemus, a congenial old teacher of Aristotelianism, highly esteemed by the philosophers about the Court, apparently a bachelor like himself. It was not long before he was attending the lectures of Eudemus and had adopted him as a preceptor. Ilberg believes⁶ that Eudemus also came from Pergamum, and that it was the natural sympathy of compatriots which brought about their intimacy. He draws this conclusion from the expression (xiv, 621)⁷ which can be taken to mean "our fatherland" employed once or twice by Galen in conversing with Eudemus, though it may be only an editorial *we*. In any case Eudemus had been in Rome many years, at least ten (xiv, 624), and had made a niche for himself among the intellectuals. He is, of course, not to be confused with the old physician Eudemus in Pergamum whom Galen admired and quotes in connection with fractures of the skull (x, 454) and the treatment of dysentery (xiii, 291).

Later Galen treated the Roman philosopher during a most serious quartan fever and a cordial friendship developed. Eudemus was at the time of his illness sixty-two years old in comparison with Galen's thirty-three, and he apparently died before the Pergamite returned to Rome in the year 169. From his own account we have reason to believe that Galen came to the capital practically a stranger, that the old peripatetic was his first acquaintance of

note, and that he came to know him through attendance at his lectures. Eudemus introduced him to at least four consuls and a number of philosophers and rhetoricians, all of the highest social standing and among the capital's most brilliantly educated men. At this time, too, his friendship with Epigenes developed. Epigenes appears to have been the usual physician of Eudemus and possibly it was through the philosopher that Galen became acquainted with him.

Epigenes (in the Kuhn edition of Galen's Works Latinized to Posthumus) remained one of the Pergamite's most intimate medical friends in Italy during not only his first (163-166 A.D.) but his second sojourn (169-180 A.D.). Following the custom of the time Galen went to the public bath every afternoon, frequently, apparently, in the company of Eudemus and Epigenes. Usually before entering the water they exercised in the gymnasium or garden, Galen by wrestling, until the summer of 165 when he dislocated his clavicle. Following this he limited himself to the less strenuous sport of "small ball." About twelve years later (177 A.D.) he wrote a little book for Epigenes on the advantages of small ball over other forms of exercise, and two years later (179 A.D.) compiled for him the well-known work on prognosis from which are quoted many anecdotes and many biographical data of his sojourn in the great capital. The latter (xiv, 598-673) is the most bombastic writing from his pen and displays a megalomania scarcely imaginable in a scientific investigator of his standing. It gives an inkling, however, into the mental processes of Epigenes who apparently encouraged the Pergamite in his self-confidence and aided in developing his tendency to the spectacular. The fact that Galen fails to

mention the teachers of Epigenes or any special work he did allows the assumption that he was only an ordinarily competent general practitioner without the scientific attainments of the physicians, Martial and Antigenes, who will be met with as consultants in the illness of Eudemus.

While Galen was attending his lectures, Eudemus fell ill with quartan fever. Although Epigenes was his physician, Galen who lived nearby called once or twice daily to see him in a social way. It is to be remembered that the Pergamite had traveled extensively while pursuing the broadest studies. He had already written two dictionaries, a compendium of anatomy, and a large philosophico-medical work in fifteen volumes on scientific demonstration. He had made several important discoveries in anatomy, among them the one for which he is best known, namely, that of the nerve of the voice. He was a fluent conversationalist, not adverse to talking about himself and what he had done. It is impossible to imagine that during the period of their association the old philosopher would fail to recognize that Galen was a person of exceptional attainments.

This illness of Eudemus is here related in practically all the detail given us by Galen (xiv, 606 et seq.) in order to show how patients were attended and treated, and how the attending physicians had no hesitation in expressing their divergent opinions even in the presence of the patient. This was partly the result of the number of different medical sects in Rome each of which claimed omniscience and derided the others. Galen met at the bedside Eudemus' numerous intellectual friends in high public office. It was also at this time that he aroused the antagonism of

two physicians of ability and prominence by his ostentation.

Eudemus' disease, which later proved to be quartan fever, began with a chill about three o'clock one afternoon in January, (163).⁸ He abstained from food the next day until after this hour, and also on the following day. When nothing occurred he bathed, ate moderately and received Galen, the physician Epigenes, and other friends and conversed with them as usual. On the next afternoon Eudemus accompanied Galen and Epigenes to the *thermae* where they met other medical men, and he laughingly asked if he might bathe in safety. Epigenes answered at once that no harm could result since the condition must be definitely past, and the other physicians present agreed except Galen who remained silent. Noting this, Eudemus asked his opinion, and he replied that the time was still too short to deny the possibility of recurrence of the chill. "If you feel the pulse," said Epigenes, "you will be convinced." Galen answered that not having been Eudemus' physician he did not know his natural pulse, and could say nothing definitely, though his manner and words suggested suspicion. On the strength of the expressed assurance, the old philosopher bathed and then dined abstemiously.

That evening Eudemus sent for Galen and asked him to feel the pulse again, and his suspicions were more strongly aroused when he found it slower and softer than he thought it should be—an almost pathognomonic sign of the intermission between the paroxysms of quartan fever (xi, 22).⁹ The next day Eudemus ate lunch as usual and in the afternoon the other physicians declared he was free from danger, yet Galen seeking out Epigenes told him he feared a quartan fever was

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developing. The Pergamite then departed to visit a patient at a distance. This proved to be a youth, also suffering from quartan fever, and he apparently continued visiting him for he assures us that not only was the treatment successful, but as in the case of Eudemus he was happy in his prediction of when the crisis would occur (xiv, 624).

In Galen's absence, Eudemus bathed and dined and shortly after felt a sensation of heat throughout the body, but attributed it to some old wine he had taken, and so expressed himself to some physicians present. Since they likewise ascribed it to the wine nothing more was thought of it till three days later when he had another attack, and quartan fever was diagnosed. Under the circumstances, he could not but commend Galen who had made the diagnosis merely by feeling the pulse.

From this time the fever increased in severity and a consultation was called of several of the most prominent physicians, among others the well-known and highly esteemed Antigenes and Martial. They recommended "the theriac" on the morning of the day on which the next attack would be normally expected. Apparently Eudemus wished Galen to participate in this consultation, but he refrained in order, he states, to avoid dissension, yet when the consultants had departed, Epigenes asked him, in the presence of Eudemus, what he thought of the remedy, and he responded that it would not only be ineffective, but that the quartan would become a double quartan.

The Pergamite also recommended the theriac in quartan (xi, 40) but only after the height of the disease had passed. For the general reader it may be stated that the theriac was an unscientific senseless compound of about one hundred drugs, none of which could

benefit quartan fever, especially in the small doses prescribed, and some, for instance, opium, might have a deleterious effect.¹⁰ Though Galen's statement in the hearing of Eudemus about the medication of the other physicians appears to us reprehensible, it was not considered unethical at the time, since the different sectarians in this sect-ridden age showed no hesitation in telling patients what they thought of the other physicians' advice and prescriptions.

The consultants came the next morning before Galen or Epigenes had arrived, and Eudemus told them what Galen had said, but they scoffed at the idea and on their departure Eudemus took the medicine. A paroxysm occurring shortly after, they were called in again, but stated that this sometimes happened after the first dose, but would not after the second and they again departed. The paroxysms instead of letting up, however, increased in severity, yet the consultants continued the remedy in the same way. Then one evening when Epigenes and the Pergamite were present Eudemus asked his opinion in regard to future paroxysms and apparently in regard to the case in general. Galen felt the pulse and said he hesitated to express himself that evening, but thought he could the next morning after inspecting the urine passed during the night. Arriving about 7 A.M., and coming again about 11, he examined the urine, felt the pulse, and stated that he believed the third attack of what had now become a triple quartan would occur at the usual hour.

Shortly after he and Epigenes departed, but they were still together when Galen was called to visit a slave of Charilampus, the valet de chambre of Marcus Aurelius, in whom he found a wounded [apparently a ruptured] tendon. The case had been in the hands

of the court surgeons without improvement. Employing the method he had developed while treating the gladiators in Pergamum the condition was cured (xiv, 624).¹¹ This surgical result almost surely came to the ears of the Emperor and others about the Court, and while raising the operator in the estimation of the laity, gave occasion for offense to physicians who had definitely separated the practice of surgery from that of medicine, and considered it at least not quite *au fait* to do both. Evidently, too, while following up the treatment of Eudemus he must have continued to visit this patient who was probably cared for in the slave quarters in connection with the royal palace on the Palatine.

While Galen and Epigenes were away Sergius Paulus, who was a close friend of Marcus Aurelius and who became Prefect of the City during Galen's second sojourn, and Flavius Boethus, a highly regarded peripatetic philosopher and past consul, paid a visit to Eudemus and he recounted to them the prediction of the afternoon attack. When this occurred Eudemus full of admiration told the visitors not only of the Pergamite's uncanny early knowledge of the case, but described his previous anatomical investigations. When Boethus, an earnest student of biology, heard of the discoveries in anatomy, particularly that of the nerve of the voice, and that of the movement of the chest in respiration, he was enthusiastic, and after meeting Galen asked for a demonstration. Later Boethus mentioned this coming demonstration to Paulus, Barbarus, the uncle of the Co-Emperor Lucius Verus, and to the consul Claudius Severus, whose son ~~was~~ married the daughter of Marcus Aurelius, all of whom were interested.

Eudemus' quartan had now become

a triple quartan, and since it was already mid-winter the physicians despaired of saving him. It was at this stage Galen assumed charge of the case, though other physicians (at least five) continued to call. The Pergamite tells us that by good fortune he was living near Eudemus and so could visit him twice a day which appears to indicate that he was at the time a very busy man. Antigenes ridiculed the new treatment, and when some of the laymen present proceeded to laud Galen, he derisively said: "Eudemus is sixty-two years old, and suffering as he is from triple quartan fever in the middle of winter, Galen promises to cure him; wait a little and you will change your opinion when you see the old man buried."

Despite this pessimism, however, Galen soon announced that one of the three quartans was about to cease, and this happened; then that a second would stop, and to the general astonishment this occurred; finally, he was able to tell Eudemus that the last of the excess of black bile would be expelled from the body that night, and afterwards he would be well. Hence it is not surprising to learn that the old philosopher became so enthusiastic that he proclaimed to his friends that his cure was miraculous and added that the Pythian Apollo was certainly speaking through the lips of the Pergamite, for not only did he cure his patients, but told them exactly the day on which the cure would take place. He further insisted that this occurred while the other physicians were scoffing at the idea that it was possible to cure an old man of triple quartan in winter time though it was their improper medication which had tripled the simple quartan. Exasperated, Martial retaliated, and among other things stated that Galen's predictions were not from a legitimate knowl-

edge of medicine, but an evil knowledge of sorcery (xvii, 250).

All of the philosopher's lay friends were naturally elated to have him restored to health, and in reporting the cure did not minimize the accomplishment. The physicians on the contrary were very much chagrined for they had expected, and according to Galen, even prayed for his discomfiture. Further, from the Pergamite's description, Antigenes and Martial at once showed their envy and spitefulness—the former reproaching Galen for his interference, the latter who up to this time had exhibited only friendly feelings, meeting him by accident among the book shops on the Sandalarium, asked sarcastically if he had read the second book of Hippocrates on Prorrhetics,* and when

* For the sake of the modern reader who would scarcely know the works of Hippocrates sufficiently well to recognize the subject matter by the mere naming of the book, it may be stated that this begins with definite disapproval of physicians who make ostentatious prognoses. Hippocrates says he has heard of many wonderful predictions such as he himself could not pretend to make. For instance, a physician calls upon a patient considered in a desperate condition by another and predicts he will not die, but will lose his sight; or in a second case will become lame of a hand. Again certain practitioners pretend to so much exactness, that if a patient is put on a definite regimen, and is guilty of any act of omission or commission in regard to food, drink or venery, they will detect it. Hippocrates makes no pretensions to any such skill and considers himself able to recognize only the symptoms by which it may be known whether a man will die or live, or whether the disease will be of short or of long duration.¹² This has been quoted at some length because as can be seen in this and other cases Galen showed a tendency to the spectacular in his prognoses and enjoyed the surprise and astonishment engendered. Yet in defense of Galen we find later in this same book on Prorrhetics, prognoses by Hippocrates almost as startling.

Galen replied he had, Martial continued: "Some physicians do not believe it a genuine work of the Master, but since you have read it, you at least know its scope and the application intended."

"I am not such a charlatan," said Galen, "and I would like to know why you insinuate it."

"As you were leaving Eudemus yesterday evening," answered Martial, "you predicted merely after feeling the pulse that the condition was about to be relieved by stool, following which he would be well."

"You heard this from Eudemus, not from me," Galen responded, and parting from him, immediately went to see the philosopher to whom he repeated the conversation, "while wondering at the malevolence of even eminent physicians in the city of Rome."

Continuing Galen's words (xiv, 621):

Eudemus assured me that I felt injured because I placed the medical men of Rome on the same plane with those of Pergamum, though they are worried and fretted by many things tending to make them irritable. Do not think that good men are perverted in this city, but those who have evil tendencies find much more material on which to exercise them than in provincial towns. And when they see the number with no more ability than themselves becoming rich, they are prone to imitate their devious ways, and gradually sink into similar depths of depravity.

In addition I have long recognized that it is not alone weakness of character or inordinate desire for wealth that is responsible for further debasement of the already depraved but the wish to live on a plane with people about them especially our public officials who should, but do not prove examples. Such individuals if legally prevented from certain sharp practices turn to others they have learned by experience to be safer. The inhabitants of small towns have not the same allure-

ment of great gain, are personally known to fellow citizens, and if they do even petty wrong are subject to criticism. Here where they are not known and the profit appears so large, deviation from rectitude is easy and base natures become worse.

Even here they pick out for plucking the unwary, unsophisticated and ignorant who are no match for them. And though they have no hesitation in abusing one another, on the slightest criticism from without, as brigands come to each other's aid, they combine against us, differing from brigands only in this, they carry on their business in the city instead of in the mountains.

What I have resolved, you have often heard [said Galen] namely, that when the war in my fatherland comes to an end, I expect to depart from Rome, making here only a brief stay in order to avoid prolonged association with these trimmers and fortune hunters.

They are unaware, [replied Eudemus] that this is your intention, and if informed of it, judging others by themselves they would doubt its truth. For when they found themselves in straitened circumstances on account of incompetence and could no longer remain in the provincial city where they were known, they sought the capital with the idea of gain through shrewdness and craft, and cannot believe that others ever come and are willing to depart before they too have accumulated riches. And, if you tell them of your family and possessions in order to show that you have sufficient even without the practice of medicine, they will say you are falsely representing yourself, for what they do, they suspect of others.

After Eudemus had said this and even more he added that if they could not injure by dishonest criticism, there were no depths of villainy to which they were not ready to descend. He thereupon related that about ten years before a young man had come to the city also animated with the desire to

practice and teach the art of healing, and he was foully taken off by poison with two of his slaves who had come with him.

Thank you, my dearest preceptor, [said Galen] for making me acquainted with their depravity. After this, I will hold myself aloof, and since there is nothing to be learned from them I will depart from this large and populous city to a small one, where the origin of one's possessions is known, and where one's education and manner of life are recognized, for I realize that my studies did not fit me to cope with their ignorance and craftiness.

The work on prognosis in which these early experiences in Rome are related, was written by Galen about fifteen years later for Epigenes, and it is likely that this conversation with Eudemus was not continuous, but represents statements expressed on different occasions over the next six months while he was further antagonizing the medical men of Rome. For he did not leave until about two years later, and for at least the next six months he continued practice, and immediately after Eudemus' illness began to give demonstrations in anatomy on the solicitation of Boethus. Further, it was not long before he got into other serious arguments with the Roman physicians in connection with venesection.

We know nothing more of the friendly good old philosopher in spite of his social acquaintanceship with so many of the high public officials about the court of Marcus Aurelius. He apparently died not long after, possibly after Galen's departure in 166 since he fails to mention him in connection with his second sojourn. Well known as he was he surely never realized it was his kindness to the young stranger which was to transmit his name to posterity, and though future ages would always

know he was regular to the extent of twice and sometimes thrice daily in his natural course of life (xv, 567), they would not know a single special tenet of his philosophical teaching.

All of our knowledge of the two consultants on the case of Eudemus who were flouted so rudely comes from Galen, yet even from his account they appear above the ordinary. Antigenes, much older than Galen, belonged to the Dogmatist sect, and had been a pupil of the great Empiric Quintus, the teacher of at least three of the Pergamite's teachers. As a student at Alexandria he had enjoyed a personal acquaintanceship with Marinus whom Galen considered the greatest anatomist of the age and called the restorer of anatomy. Unfortunately this eminent anatomist had died before the Pergamite reached Alexandria, yet he became sufficiently enthusiastic about his treatise on this subject to compile and publish a compendium of it. With Galen's high regard for these two teachers of Antigenes, and for the Dogmatist sect with which he was affiliated, and which Galen put on a plane nearest to the regular medicine he advocated,¹³ they should have had many interests in common. Though previously at least friendly, Galen's actions in the case of Eudemus caused a falling out which was apparently permanent. And modern sympathy is on the side of Antigenes.

Martial whom the Aldine and Kuhn texts call sometimes *Martialios* (xix, 13, 14) and again *Martianos* (xiv, 615), an old man past seventy, was a well-known anatomist belonging to the highly esteemed sect of Erasistratean-Pneumatists, one of the most scientific of the many medical sects in Rome.¹⁴ Unlike some others it at least insisted on the necessity of anatomy and physi-

ology in the study of medicine. It was, also, strongly against the extravagant and almost indiscriminate employment of venesection to which some sects, and even Galen himself, were addicted. Erasistratus, an anatomist and practitioner of renown, is justifiably reckoned the second greatest physician of pre-Christian times, and is to some extent the father of local, in contradistinction to humoral, pathology. His disciples had reason to be proud of their progenitor. The Pneumatist School had added to the study of medicine several valuable ideas which had been adopted so completely by the Dogmatists and Empirics that in his articles on the sects Galen describes the Dogmatist, Empiric and Methodologist, but not the Pneumatist, since its tenets were made known in the description of the first two.

As an anatomist Martial was sufficiently well known that two of his works on dissection had already run through large editions, and thirty years later were still popular (xix, 13). In fact it appears probable that he was the best known anatomist in the capital. According to Galen (xix, 13), in spite of his age he was still envious and contentious, which apparently means that he questioned the Pergamite's anatomical and physiological discoveries while endeavoring to show their falsity or their trivialness.

Even before the illness of Eudemus, Martial had been hearing of Galen's new anatomical promulgations and his interest had been sufficiently aroused to make inquiries (xix, 13): "To what sect does this Galen belong?" he asked. "No sect," came the answer, "in fact he calls slaves those who follow any man whether he be Hippocrates, Praxagoras, or any other. He claims he chooses the useful wherever he finds it." "Of whom

among the ancients does he talk most?" continued Martial. A lapse (xix, 14) in the text conceals the response, but the inquiries show what other physicians were probably also asking.

Again as in the case of Antigenes our sympathy is with Martial in his condemnation of Galen, and we are not surprised at the termination of whatever friendship existed. Several months later some Erasistrateans friendly with Martial meeting some of Galen's students on the street, a dispute on venesection developed (xi, 187 *et seq.*). Becoming acrimonious, yet remaining undecided because the necessary reference books were not at hand, the discussion was postponed till the next day, and a place, apparently the Temple of Peace, appointed for the meeting. Though some lay people who had become interested turned up, the Erasistrateans were conspicuous by their absence and Galen considered that he and his students came off victorious. Shortly after he wrote a work (xix, 13) on the anatomy of Hippocrates in six books and of Erasistratus in three, dedicated to his patron and friend, the consular Boethus, on which he expended more than ordinary care to avoid the possibility of justifiable criticism at the hands of Martial who, he thought, might review them.

With the remarkable diagnosis, prognosis and cure of the quartan fever of Eudemus before us, we cannot but be interested in the means Galen used to obtain these results. In describing this case in his work on Prognosis to Epigenes, about 179 A.D., he details no more than has been related, but in his work on Therapeutics (xi, 1-146), written for his friend Glaucon, about 175 A.D., he gives a full explanation of intermittent fevers. Since Epigenes undoubtedly had this publication, it was unnecessary

for Galen to go into the subject again. According to this his diagnosis and treatment were based on the following grounds, and while he does not dilate on how his prognosis was accomplished, it is easy to recognize it as the result of previous experience with this disease.

Quartan fever was diagnosed by the length of the intermission between paroxysms, by the existence of an epidemic, and the enlargement of the spleen. Other findings to which Galen attributed significance were, its occurrence most frequently in persons past middle life, in the autumn season, and in persons slightly but not markedly bilious. Both tertian and quartan were associated with a chill, but that of the quartan was not so violent and gave a sensation of cold while that of tertian produced a sensation as of pricking with a pin. At the beginning of the chill the pulse became slow and the interval between the beats longer even than would ordinarily correspond with its slowness. This peculiarity of the pulse continued and could be found even during the intermission between paroxysms. It was the presence of this sign during an intermission that first led Galen to suspect the disease in Eudemus. At the height of the fever the pulse was less rapid than in tertian. It also showed what was known as the febrile irregularity, that is, it was faster at the beginning and end of the beat than in the middle. In tertian the urine was yellow, in quartan variable but crude, that is, it never appeared cooked. Quartan was believed to be due to an excess of black bile and tertian to an excess of yellow bile.

At the beginning of the disease the treatment was conservative and no violent measures were employed, not even evacuants, unless a marked plethora

existed. If, on venesection, the blood was thick and black, such as is usually seen in the splenic vessels, the venesection was continued and a large amount drawn; if the blood was thin and yellowish, the venesection was stopped immediately. The abdomen was relaxed by ordinary means such as poultices, but if these were not successful, sharp enemas were used. At the height of the disease diuretics were recommended and purgatives capable of evacuating black bile were employed rather freely. An emetic of hellebore was also prescribed. After energetic purging the theriac was given. Yet it was considered very bad practice to give it before the acme since often a double or triple quartan of greater seriousness might be created with even death as the result.

The food was nourishing and of a character not to create wind. Pork and viscous meats were prohibited. A light white wine, the flesh of certain birds and of fish easy to digest, salt meats, mustard and pepper were suggested. Massage, walks, baths and other usual distractions were not entirely forbidden

until the height of the disease when definite bed rest and light diet were enjoined.

After having learned the exact cause, the manner of development and the specific treatment for both tertian and quartan fever modern recommendations are: Rest in bed. Easily digestible nourishment. If the chill is severe, the patient is wrapped in blankets and given hot drinks; if the fever is high, cool sponge baths and cold drinks are given. At proper times quinine is administered.

It is interesting to note that in the treatment of Roman days actually nothing except the bed rest was beneficial and some of the recommendations were distinctly harmful. Yet the death rate of this rather distressing disease was low and the physicians thought their suggestions instrumental in the cure. To our chagrin, however, we are obliged to confess that many cases of measles, scarlet fever, pulmonary tuberculosis and other diseases are becoming well today with similar assumption of credit in spite of analogous prescribing.

REFERENCES

1. The figures in parentheses refer to the volume and page of the Kuhn Edition "Galen Opera Omnia," Leipsic, 1821. In this particular instance there happens to be an accidental omission of two words in the Greek text of Kuhn, but since this omission does not occur in other editions, such as the Aldine, and is corrected even in the Latin translation of Kuhn, there is no doubt as to the meaning.
2. These facts, as well as his early upbringing and background, are related in detail in the previous four Parts of *Galen's Writings and Influences Inspiring Them* which have appeared in the *Annals of Medical History*, New Series: Part I, 6:1, 1934; Part II, 6:143, 1934; Part III, 7:428; 570, 1935, and 8:65, 1936; and Part IV, 9:34, 1937.
3. WATSON, P. B. Marcus Aurelius Antoninus. New York, Harper, 1884, p. 51.
4. Modern historians divide these people into the Norici, Marcomanni, Quadi and Yazyges, though Galen always speaks of them as the Germans.
5. A Portrait Study and Defence of the Portrait Study in The Works of Lucian of Samosata, translated into English by Fowler, H. W., and Fowler, F. G., Clarendon Press, Oxford, 1905, 3:13; 24.
6. ILBERG, J.: Aus Galens Praxis. *Neue Jahrb. f. d. Klass. Altertum, Geschichte u. Deutsche Lit.* Leipsic, Teubner, 1905, 15:286.
7. In Galen's Greek this expression reads ἐν πατρίδι γῆδε and it is translated into Latin by patriae nostrae.

8. Galen specifically states in two places (xiv, 613 and 614) that when he began to treat him it was mid-winter. Since exact mid-winter is February 4, it is evident the disease began in January.
9. See also Daremberg, Charles. *Oeuvres Anatomiques Physiologiques et Medicales de Galien*, Paris, Bailliere, 1856, 2:718.
10. On the theriac see Walsh, J. Galen's Second Sojourn in Italy and his Treatment of the Family of Marcus Aurelius. *Medical Life*, 37:473, 1930.
11. See Part IV referred to in Footnote 2.
12. ADAMS, F. *The Genuine Works of Hippocrates*. London, printed for the Sydenham Society, 1849, 1:257.
13. See Galen's two articles, *Sects to Beginners* (I, 64-105) and the *Best Sect to Thrasybulus* (I, 106-223). Both are also in modern French. Daremberg, Ch. *Oeuvres Anatomiques Physiologiques et Medicales de Galien*, Paris, Bailliere, 1856, 2:376.
14. WALSH, J. Galen clashes with the Medical Sects at Rome. *Medical Life*, 35:408, 1928.

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