

HISTORICAL AND BIBLIOGRAPHICAL NOTES.

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

By GEORGE JACKSON FISHER, M.D.

XX. HALY ABBAS.

930—994.



THE subject of the present sketch was a celebrated Arabian medical writer of mediæval times, concerning whose individual life and career we at this time possess no knowledge, beyond the fact that he was an Arabian, born in Persia, dwelt much of his time in Bag-

dad, and died in the year nine hundred and ninety-four. His exact age is also unknown. He must have entered this world about the same time that his illustrious predecessor—Rhazes—departed from it; as he, in turn, closed his earthly career when his distinguished successor—Avicenna—was a promising lad of but fourteen years of age.

Notwithstanding that the biographical and historical

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books are barren in detail and nearly silent as to his personality, nevertheless we have the gratification of possessing his great work, which was styled the *Royal*, which has survived nine hundred years, and from which we are enabled to learn much that relates to the principles and practice of medicine and surgery as understood by the Arabians and Persians in that remote period of time.

The reputation of Haly Abbas was so great that he was surnamed the *Sage*, and so almost supernatural were his powers and skill in the art of healing that he was also called the *Magician*.

As has already been shown to be the case with the name of Rhazes so likewise do we find the name of Haly Abbas variously written; thus: Ali-Abbas, which is in English equivalent to Ali the son of Abbas; Ali Ben Abbas; Ali Ben Al Abbas Al Madjoucy; Alee Ibnool Abbas; Ali Ibnu-l-Abbas; and, Haly filius Abbas.

Freind, in his "History of Physick," says, Haly Abbas has left us the oldest, as well as the fullest and best account we have of ancient Arabian medicine, and of the medical writers of that country. Haly writes of Aaron, who flourished about the year 622; of Mesue the elder, who died A. D. 846, and whose works are not extant; of Serapion, about 730; and of Rhazes, who died in 932. He comments freely and critically upon the works of all his predecessors, and declares that he was led to the task of writing his *Al-maleki*, or the *Royal* work, partly on account of the faulty manner in which all previous writers had treated the subject, and partly because the improvements made by the Arabians and Persians in chemistry, pharmacy, and the *materia medica*, rendered a new systematic treatise on the theory and practice of medicine and surgery not only desirable but necessary.

Haly Abbas intended this work to be a complete body of

theory and practice, and hence he styled it the whole book of medicine—*Liber totius medicinæ*—as we find it in the Latin version. The Royal Book—*Liber Regius*—is considered by many to be the best and most complete treatise on medicine which has come down to us from ancient times. Its Arabic name will be found variously written in different places, viz.: *Almaleki*, *Almaleci*, *Almalaki*, *Al Maleky*, and *Al Kamel*.

It was a strange coincidence that the Royal work of Haly Abbas, which is as voluminous as the celebrated *Continens* of Rhazes, made its first appearance in the world the same year—A. D. 980—that Avicenna was born, whose writings were destined to supersede it. The *Almaleki* was dedicated to the reigning Caliph *Adhad Ed-Daulah*, and, according to oriental usages, in language the most grandiloquent and flattering. This Caliph of Bagdad was the second prince of the *Deelamee*, or *Dilami* dynasty, and ruled over the western part of Persia in the tenth century. He was a mild and beneficent sovereign who fostered letters and public improvements, and died much lamented by his people in the year of grace 983. As he was the patron of Haly Abbas, I have been curious to collect the several modes in which I have found his name printed in different books. Thus, *Adad-Odaula*, *Adad-Oddaula*, *Adhad Ed-Daulah*, *Addad Addaula*, *Adad oudaula*, *Ada-d'odoula*, *Adad Heddulæ*, and *Azad-ud-Dowlah*. Which of these is the correct one must be left to the learned reader to determine.

The work of Haly Abbas was translated from the Arabic into Latin, as early as the year 1127, by *Stephens* of Antioch. It was first printed and published on the twenty-fifth day of September, 1492, in folio, at Venice. Only two editions have ever been printed; the second was published at Lyons, (*Lugdunî*) on the eighteenth day of the month of March, 1523. The writer of this sketch is happy in the possession

of a fine copy of this edition. It is a small quarto, bound in flexible covers, has 319 numbered leaves, and four others, making 644 pages and a very curious engraved title-page. The somewhat lengthy title is printed in red ink, and arranged in a triangle, with one angle at the bottom. James Atkinson, the venerable, quaint, and humorous author of the *Medical Bibliography, A. and B.*, 8°, London, 1834. gives the following characteristic description of this edition :

“The edition of Jacobymi, Lugd, 1523, is a very good one. Haller used this edition, and is one which I have. It affects totius Medicinæ, in two parts; the Theoricæ pars consisting of 135 leaves, double columns, in ten books; the Practicæ pars extending the pages from 136 to 319, also consists of ten books, black or gothic letter, with the expositio terminorum Arabicorum. The books are full of practice and prescriptions; the title page is neat, and wrought with the fac-similes or portraits (no doubt) of Hippocrates, Haly, and Galen: all three are pouring over their books, apparently in a very brown study, almost approaching to black. There are two young and winning women looking up at them, seemingly petitioning them to come down, judging from the cut of their gowns, and their dialect, they are French women, (strange!) one is singing out Allez, Allez, the other A bas, A bas.—Devils incarnate! This is an odd concentration. Why were the women placed there—who were they—what were they? Was it merely a (very unjustifiable) piece of wit, or malice, in the printer only, or the printer and his devil, there to place them? Why should there be only two ladies below stairs, when above there were three gentlemen. Were Hippocrates, Galen, or Haly Abbas, likely to bother themselves with women? Under these difficulties I must again submit the case to the learned reader. (In my own private opinion it was malice prepense.)”

p. 63. Atkinson gives two editions of the work of Haly Abbas which are not given by other bibliographers, viz: Lugduni, fol. 1515; and Lugd. 4°, 1527, both of which I believe to be errors, as he is not by any means always reliable.

Haly Abbas had a son whom he educated with great care, under his own immediate superintendence, for a physician, and although a man of great promise from whom much was expected, had he not written a treatise on the diseases of the eyes, which is yet extant, we would at this day have been ignorant of the existence of Jesu Hali, the son of Haly Abbas. This treatise was printed at Venice, in folio, in 1499, with the title *De cognitione Infirmorum Oculorum et Curatione Eorum*.

The following is a brief analysis of the contents of the *Almaleki* of Haly Abbas. For many facts pertaining to the surgery of this author, which is embraced in the ninth book of the *pars Practica*, which is subdivided into one hundred and eleven sections, I am much indebted to the learned scholia with which Mr. Francis Adams has embellished his translation of the works of Paulus Aegineta. I have avoided the introduction of anything relating to Arabian surgery which was not the special teaching of Haly Abbas. Most of the surgical principles and practice of the Arabian writers were copied very freely from the works of Paulus, and yet each of the Arabians was free in the expression of his approval or condemnation of any and all surgical opinions from whatever source obtained.

*The Royal* work, *Almaleki*, is divided into twenty books, the first ten of which are called theoretical, and the last ten practical. The first series of books treat of a great variety of subjects, as of humors and complexions, of the figure and proportion of the human body; on temperaments; on the aptitude of parts, as spleen, liver, bladder, uterus; on the

theory of fever ; of particular actions, as laughing, or sneezing ; on the variations of the pulse ; on phrenitis, lethargies and other affections of the head ; on fluxes and secretions ; on regimen ; on baths, natural, and non-natural ; and on *varia variorum*.

There is one chapter which is very curious, viz : “ *De sani corporis signis et servis emendis.*” In this most minute directions are given concerning every thing which relates to the soundness of the mind, and health of the body of servants whom you may propose to hire, or, particularly, to purchase. We are thus informed of the abject state of slavery which existed in that day in Persia. He tells us that once a year servants stood in the public places for the inspection of purchasers or masters. Physicians were probably employed to make these inspections as we may infer from the directions of Haly Abbas. The servants were to be examined from top to toe—“*Tam tunc, autem a Capite incipe, et ejus diligenter habitudines vide et agnosce, et ad ea quæ subsunt et sequuntur descende membra, et sic usque ad inferiora,*” etc. The complexion is to be noted, the servant must be neither too fat, nor too lean ; beware of epilepsy, or faintings ; examine all the members of the body ; avoid the bandy-legged, if a ladies' maid, or gentleman's valet is wanted.

The practical part of the work also contains ten books, arranged in the following order : i. Health and hygiene ; ii. medicines adapted to special diseases ; iii. fevers and inflammations ; iv. manifest diseases, skin, wounds, etc., ; v. diseases of the head ; vi. diseases of the chest ; vii. diseases of the abdomen ; viii. diseases of the genitals ; ix. of surgery ; x. antidotarium or *Materia medica* and pharmacy.

[To be Continued.]

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XX. HALY ABBAS (CONCLUDED).

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HE author of the *Almaleki* does not claim entire originality in the composition of his *Royal Book*.

Haly Abbas tells us in the preface of this work that he never strays from the Greek medical writers, except in matters concerned in *materia medica*, which branch, he says,

the Arabians and Persians have prodigiously enriched. He claims to have always applied the principles of the Greeks, merely modifying them according to variations of climate and race. Notwithstanding this declaration it will be found that the work of Haly abounds in original theories and principles hitherto unknown, and which are greatly to be preferred to any found in the works of Avicenna.

Haly Abbas collected a large number of his observations

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from his extensive experience in hospitals, and lays it down as the cardinal requisite of all young physicians to avail themselves of the clinical advantages afforded by these great schools of medicine. Here, he remarks, you will see diseases in their true light which the books describe in a manner little approaching to nature.

The anatomy and physiology of Haly Abbas are emphatically those of the ancient Greeks, with some additions made by the modern Greeks, who assigned special functions to each organ of the body. Haly enumerates correctly nine muscles of the eye, viz: six for the globe itself and three for the lids.

He treats very minutely of physiological semeiology: as an example of his careful observations, he gives the signs by which the spots of leprosy may be distinguished from ordinary spots,—they should be rubbed with alchemilla and vinegar, and if they do not disappear after the rubbing, it can be decided that they are of a leprous character. This test was frequently employed in the purchase of slaves. He was very precise and clear in his views concerning clothing upon health; also on the value and mode of using mineral waters. He proposed a strange way of counteracting the ill effects of the water of foreign countries, advising the traveller to carry with him a little of the earth of his native land and mixing it with the water, which then could be drunk with impunity. The treatise of Haly Abbas on dietetics is said to be the best ever written in ancient times. With great care he has laid down rules of regimen for all varieties of the human constitution, and for overcoming long contracted habits. Equally excellent are his rules to be followed according to climate, age, temperament, season, and situation. His writings on all of these points can only be compared with those of Hippocrates.

There are but few points in surgery where we are any



more enlightened by the writings of Haly Abbas than by those of his predecessors, Rhazes, Paulus Aegineta and the earlier Greek surgical authors, from all of whom he has freely availed himself in the composition of his treatise.

In fistula lachrymalis our author directs us to lay open the swelling, and apply the cautery. Haly was acquainted with the lachrymal duct. (Pract. ix, 29, and ix, 72.)

In polypus of the meatus auditorius, Haly recommends incision when other means have failed. In polypus of the nose he also mentions incision, and the process of sawing out the tumor.

In the extraction of carious teeth, Haly gives very sensible advice. He recommends the operator to use a forceps, and to stuff the tooth when it is hollow. (Pract. ix., 31.) He describes very distinctly the operation of dividing the frænum in tongue-tie. He also describes the operation of amputating the tonsils with a hook and a pair of scissors. (Pract. ix., 36.)

Laryngotomy is an operation which is very accurately described by Haly Abbas. He directs us to make an incision in the skin, and to separate the edges with hooks so as to expose the windpipe, which is to be opened between two cartilages. (Pract. ix., 38.)

In opening abscesses Haly cautions against opening them prematurely, as the lips will remain in an indurated state and prevent the sore from healing. But if the abscess be seated near nerves or ligaments, he advises not to wait until it matures. (Pract. ix., 8.)

Haly approves of excision of scrofulous glands and describes the operation.

When an artery has been wounded in bleeding, our author directs us to dissect away the parts about it, and having applied a silk thread on each side of the wound, to divide the artery in the middle. When an aneurism takes place he

directs us to make a longitudinal incision, and, having dissected away the artery from the surrounding parts, to pass below it a needle armed with a double thread, and to tie the threads in two places, then to lay open the aneurysm and evacuate the blood.

In cases of distended *bursæ mucosæ*, or ganglions, as Haly Abbas calls them, he first uses discutients, and if these fail to cure, then to strike the tumor with a hard body so as to break its cyst. (ix., 10.) This plan is still employed in these cases.

Haly Abbas gives a copious account of the operation of venesection, and the circumstances under which it may be performed. He allows it to be performed even after seventy years of age, provided the patient be of a vigorous constitution. (Pract. ix., 2.) He also gives an ample enumeration of the cases in which cupping is applicable. He recommends it particularly in such cases as do not admit of general bleeding, for ophthalmia, cynanche, and in an especial manner for amenorrhœa, in which cases the cups are to be applied to the breasts.

He approves of excision in cases of cancer of the breast or extremities. He says we should allow the part to bleed until all the melancholic humor is evacuated, but says nothing of the cautery or ligature. (Pract. ix., 12.)

In dropsies Haly does not in general approve of the operation of paracentesis. He says he never saw it performed but once, and then it did not save the patient. He adds that Galen relates that he only knew of one case in which it had proved successful. He directs the incision to be made three fingers' breadth, straight below the navel, that is to say, in the *linea alba*; but if the liver is diseased, then to make it in the left side, or if the spleen, in the right. (ix., 41.)

Catheterism and injection of the bladder are very well described by Haly. (ix., 45.)

Lithotomy, by the Celsian method, is described by Haly Abbas. He prefers performing the operation in infancy, but permits it to be done at all ages. If the stone does not start out after the incision is made from the pressure of the fingers in the rectum, it is to be seized with a forceps and extracted. If inflammation ensues he recommends the application of a cataplasm and the injection of oil of roses and of camomile, or of melted butter. (ix., 46.)

In hydrocele, Haly Abbas directs us to open the tumor and cut out its tunics, and then to apply incarnative dressings. This treatment, he adds, the moderns prefer to the escharotic applications used by the ancients. (ix., 47.) He also describes the process of burning. (ix., 79.)

In cases of imperforate pudendum, whether it is congenital or the result of disease, Haly gives directions for an operation which is to be performed by a midwife. The delicate sense of the Arabians would seldom permit a surgeon to perform an operation about the genital organs of women. (ix., 66.)

Embryulcia was performed by our author in extremely difficult cases of parturition. Haly Abbas gives ample directions for the management of such cases. When the head presents, the child being dead and delivery found otherwise impracticable, he directs us to fix hooks in the hollows of the eyes, neck, or jaw-bone ; or, if the feet present, at the tops of the thighs. The body of the child is then to be dragged along. When a hand presents, he recommends us to pull down the arm and amputate at the shoulder ; and in like manner he directs us to amputate at the hip-joint when in footling presentations the delivery can not be otherwise accomplished. When the head is preternaturally large, he directs us to open it and evacuate its contents ; and to do so in like manner with the chest when any obstruction takes place at it. He makes no mention of any instrument resembling the modern forceps. (Pract., ix., 57.)

When the placenta is retained, Haly Abbas directs us to introduce the hand well lubricated with oil of violets, or the like, into the uterus, and extract the placenta if it be separated; but if it still adhere it is to be moved from side to side, and not pulled straight downwards. He adds, that when not extracted, it becomes putrid. (ix., 59.)

Haly Abbas gives some very interesting directions for the management of the new-born infant. He directs us, when there is any malformation of the head, to reduce it to its proper shape, and bind it firm. This I have frequently found some of our modern nurses attempting to do. Like Galen, he recommends that the body of a new-born child should be sprinkled with salt and powdered roses, to harden the skin. He directs us to give the child, for the first two days, sugar, triturated with the oil of sesame. He advises the frequent use of the tepid bath. He properly directs the nurse not to expose the child's eyes to the strong light of day, nor to allow him to sleep in a strong sun, for fear of injuring his eyes. When a child cries, it is the duty of the nurse, he says, to find out the cause, as a child never cries except when something hurts it. The most common causes, he adds, are, heat or cold, fleas or gnats, hunger or thirst; retention of urine or of the fæces. For retention of the urine, he recommends melon-seed with julep, both to the child and the nurse; and when the child's bowels are constipated, he directs the nurse to take laxative herbs, oil of olives, prunes, and so forth.—(Pract. i. 20.)

Haly describes the operation for the cure of fistulæ in ano, by the incision, and cautions against dividing the sphincter. (ix., 60.) In hæmorrhoids, he recommends either excision or the ligature. (ix., 61.) In imperforate anus, he directs us to make an opening, and introduce a leaden tube or a piece of sponge. (ix., 63.)

He recommends the same operation for varicose veins, as does Albucasis, viz.: either by incision or by extraction, in the former laying open the vein and bandaging the part; and in the latter dissecting out a portion of the varicose vein. (ix., 64.)

The description given by Haly Abbas of the mode of amputation of the extremities is much more complete than that given by Avicenna. A limb, he says, is amputated thus: The operation is to commence with first cutting the skin, and then when the bone of a limb is to be sawn, you must not cut through the whole flesh at once, lest an immoderate discharge of blood take place from the veins and arteries so as to occasion the death of the patient and interrupt the process of sawing the bone; except the flesh of the limb be wasted or putrid. But you ought first to divide that part of the flesh where no great arteries and veins are situated, cutting them down to the bone, which is to be sawn across as quickly as possible, the fleshy parts in the meantime being retracted with a piece of linen, lest the saw should tear them and occasion bleeding and pain. When the bone is sawn across, whatever portion of the flesh remains undivided is to be cut, and then the veins and arteries are to be burned. When the bleeding is stopped a pledget with suitable bandages is to be applied (ix, 65).

Haly Abbas is quite full on the methods of extracting weapons from wounds; it is much the same as that given by Albucasis. He mentions that he had seen cases in which an arrow had been lodged in the intestines, and although fæces were discharged by the wound, the patient recovered. He adds that others relate cases in which recovery took place, although the liver or omentum had been wounded (ix, 15).

In fractures of the lower jaw, our author advises that the teeth be secured with a thread; and then to apply bandages,

and occasionally a compress. Haly Abbas gives directions for the treatment of fractures in general; he recommends the splints to be made of pieces of alcanna, or any hard wood. Afterwards he directs the limb be laid upon a table, having a pad (pannus), placed on it, which last is to be secured with fillets. He gives particular directions not to apply the splints over the processes of bones, and when inflammation comes on he forbids splints to be used at all; in that case the patient is to be kept upon restricted diet. The bandages are to be removed in the course of three days. He says that when a wound, a fracture, and a dislocation are combined in one case, each is to be treated upon general principles.

There are still extant several manuscript codicils of Haly Abbas' work; some in the library of Leyden, more in Paris, and at least one in the Bodlean, at Oxford, England.

From the above account of the principles and practice of Haly Abbas it would appear that both medicine and surgery were fairly well understood among the Arabians nine centuries ago. A still more detailed analysis of his writings would have the effect to diminish our boastful admiration of the much-vaunted progress of the present age and the immediate period in which we live. Have we not hitherto, through the general neglect of medical history, been too much inclined to underrate the knowledge and skill of the medical profession in ancient times, and to regard the practice of our art in ages long passed as little more than blind and dangerous groping in the darkness of ignorance and superstition? Whereas, the precious treatises which have survived the wasting touch of time and are still extant, are replete with evidence of the sensible and judicious methods and resources of the physicians of ancient and mediæval times; through which we are enabled to see how attentive they were to the laws of health, to dietetics, cloth-

ing, gymnastics, baths, the influence of location, air, and waters; the effects of change, of journeys, of sea voyages; the properties of medicines, both simple and compound; the skillful use of ingenious surgical instruments and appliances, such as the male and female catheter, the uterine speculum, the forceps for extracting teeth, and crushing vesical calculi; and also many other instruments.

I have been both enlightened and charmed by my studies in medical history, and have been richly repaid by finding far more to admire than to censure in the ancient classics of our profession.