

ARETAEUS THE CAPPADOCIAN.

By EUGENE FAUNTLEROY CORDELL, M. D.,
*Professor of the History of Medicine, University of Maryland,
Baltimore.*

SUDHOFF (KARL [F. J.]) 1853-

RIDDELL ([WILLIAM RENWICK]) 1852-
6. Anatomical Slender Case in Upper

3788.
jahre 1
With
sch., vol.

RILE

3865.
Realist
Repr.
pp. 89-1

ALLE

3987.
seines C
With
schr., 19

REBE

4114.
Tissot e
Bibl. h
from vol.

ADAM

4908. S
(1908).
Illustra
Bull., vol.

5617. I
Trudeau
(1916).

Report
1916, with
and H. M.
Bull., vol.

5662. I
of the Jo
la. 8°. E

Report
with port
1908, no.

Mc CAV

5869. I
la. 8°. [

With p
Bull., vol.

6004. A
lifetime
Being th
mical Le
[Edinb.],

On Sir
Lister, M
Turner, &
Med. Jnl

KNOTT

6013. I
study in
Madness
logical
Minn., 1

Repr. f
copy, wit

ARETAEUS THE CAPPADOCIAN.¹

By EUGENE FAUNTLEROY CORDELL, M. D.,
*Professor of the History of Medicine, University of Maryland,
Baltimore.*

Of Aretaeus, personally, we have no direct knowledge, further than that conveyed by the title. This indicates that he was a native, or at least a citizen, of Cappadocia, a mountainous country in the eastern part of Asia Minor bordering on the Euphrates. It is considered probable that he lived in the second century of the Christian era, about the time of Galen, and it has been conjectured that he studied at the great seat of learning in Alexandria. Johannes Wigan² thinks he must have resided in Italy because he recommends the Italian wines, the Falernian, Fundan, Signine and Surrentine, all of which are mentioned in the works of Horace, Pliny, Martial and other Roman writers.

But little light is thrown upon the subject by his writings. He does not mention any of his supposed contemporaries, as Galen, for instance; indeed he seldom refers to individuals. The Iliad is quoted some twelve times and there are some eighteen allusions to the works of Hippocrates, chiefly the Aphorisms. We read also of the antidotes of Philo, Symphon, Vestinus and Mithridates, and these names give us some hints as to the age of our author. Philo lived at Tarsus. He is referred to by Celsus and Galen, by the former as the inventor of an eye-salve. The Philonium, or Antidotum Philonianum, is mentioned by Quintus Serenus Sammonicus, a physician, about A. D. 216, and by Marcellus Empiricus, also a physi-

¹ Read before the Johns Hopkins Hospital Historical Club, March 8, 1909.

² Aretaeus Cappadox, Oxoniæ, 1723, fol.

3788
jahre
With
sch., v

RIL
3865
Realis
Rep
pp. 89

ALI
3987
seines
With
schr., v

REB
4114.
Tissot
Bibl.
from v

ADA
4908.
(1908).
Illust
Bull., v

5617.
Trudea
(1916).
Repo
1916, w
and H.
Bull., v

5662.
of the
la. 8°.

Repo
with p
1908, n

Mc C.
5869.
la. 8°.

With
Bull., v

6004.
lifetim
Being
mical
[Edinb
On S
Lister,
Turner,
Med. J

KNOT
6013.
study
Madne
logical
Minn.
Repr
copy, w

[371] cian, about A. D. 400. The Mithridatium took its name from Mithridates, King of Pontus—century before Christ; it consisted of 54 ingredients. According to Wigan,³ in the "Compound Medicine of Vipers," reference is made to a preparation of a certain Andromachus, of Crete, the physician of Nero. This, theriaca, as it was called, because first intended for the bite of serpents, although later employed against all kinds of diseases, indiscriminately, consisted of 61 ingredients. I can find no references to Symphon or Vestinus.

Aretaeus cites the plague of Athens in relation to the supposed poisoning of the wells in the Piraeus by the Peloponnesians, remarking that this erroneous idea was natural in view of the resemblance between the effects of such substances and those of pestilential diseases.

In correspondence with his reverence for the ancient writers, it is to be noted that Aretaeus used the Ionic dialect—that of Homer, Herodotus and Hippocrates. This fact, however, is no argument against the date assigned to him, as Lucian, Arrian and others of the second and third centuries, sometimes do the same.⁴ That he was a surgeon of skill and experience, we may infer from his work on that subject—unfortunately lost—and his references to operations, as this: "I once made an opening into an abscess in the colon on the right side near the liver and much pus poured out, and much also passed for several days by the kidneys and bladder, and the man recovered."⁵

The titles of the works of Aretaeus were: I, On the Causes and Symptoms of Acute and Chronic Diseases; II, On the Therapeutics of the Same; III, Fevers; IV, Surgery; V, Prophylaxis; VI, Diseases of Women; VII, Pharmacy. Only the first and second of these are now extant, in eight books and in a very mutilated condition, whole chapters being lost; thus we find 22 entire chapters missing, besides many parts of others.

³ *Op. cit.* Also Galen, *De Theriac ad Pison., et de Antidot.*

⁴ Wigan, *op. cit.*; Sprengel, *Gesch. der Arzneyk.*, Halle, 1823, II, 60; Robert Fuchs, *Handb. der Gesch. der Med.*, Neuburger u. Pagel, Jena, 1902, I, 366; Francis Adams, *Extant Works of Aretaeus*, Lond., 1856 (Syd. Soc. Ed.).

⁵ Adams, *op. cit.*, I, 9.

(1.)

It is a singular fact that a writer of such unquestionable [371] merit as Aretaeus should have been almost entirely ignored by ancient writers. As he does not refer to Galen, so Galen does not refer to him; and this circumstance, together with a decided correspondence between their literary and professional views, Adams considers to be a proof that they were contemporaries. Alexander of Aphrodisias, third century A. D., Aetius, about A. D. 550, Paul of Aegina, about 100 years later, and the author of the *Euporista*, a work of unknown origin, are the only ancient authorities that quote him by name. He is wholly ignored by the Latin and Arabian writers. A possible explanation of this, as suggested by Adams, may be found in the numerous compilations which were made at an early period, in which his writings and views may have been merged. The first modern edition of Aretaeus was the Latin translation of Junius Paulus Crassus, a professor at Pavia, and was printed at Venice in quarto, in the year 1552. Two years later this was followed with a first Greek edition at Paris by Jacobus Goupylus. Numerous editions have since appeared, among the more recent being one in Greek and English by Francis Adams, published by the Sydenham Society in 1856, a work like everything from Adams' pen, of great erudition and merit, and which the modern reader will find it most convenient to consult.

Let us now examine the views of our author, and first those upon anatomy and physiology.

The constituents of the body are found in the condition of humor, spirit (*pneuma*) and solid, and upon the proper composition and relations of these life and health depend. As in Hippocrates, there are four humors—blood, phlegm, white bile and black bile. The blood is formed from the food in the liver. The phlegm is secreted by the brain and descends upon the different organs through the cribriform plate of the ethmoid. White bile is manufactured in the liver, black bile in the spleen. The vapors, a variety of humor, also proceed from the spleen.

The heart is the seat of the soul and of animal heat; the [372] source of respiration and of life. "What other organ is more important," he asks, "for life and for death?" It draws in

3788
jahreWitl
sch., v

RIL

3865
RealitRep
pp. 89

ALI

3987
seinesWitl
schr.,

REF

4114
TissotBibl.
from v

ADA

4908.
(1908).Illust
Bull., v5617.
Trude

(1916)

Repe
1916, w
and H.
Bull., v5662.
of the
la. 8°.Repo
with po
1908, no

Mc C

5869.
la. 8°.With
Bull., v6004.
lifetimBeing
mical

[Edinb

On S
Lister,
Turner,
Med. J

KNOT

6013.
studyMadne
logical

Minn.

Repr
copy, v

[372] spirit (pneuma) by the lungs, which are subordinate to it. The aorta arises from the heart, and in the chest lies on the left of the vena cava, with which it sympathizes. By it the spirit is carried outwardly while the veins convey the blood to all parts for their nutrition.*

The liver is the source of the veins; indeed it is for the most part a mere concretion of blood. Its function is to produce blood and bile. All the food is brought by the vena portæ from the stomach and intestine to the liver, whence it is carried by the vena cava as blood to the heart. According to certain of the philosophers, the soul has its seat in the portæ of the liver, but Aretæus does not sanction this view. He, however, quotes Homer to the effect that bile and anger are synonymous terms, an idea very prevalent through all antiquity. Inflammation of the liver produces jaundice, white jaundice, due to the obstruction of the bile ducts and absorption. He knows of the portal circulation, the ramifications of the vena portæ in the liver and the rise of the hepatic veins carrying the new-formed blood to the vena cava, being clearly described.

The lungs are of loose texture resembling wool. They are by nature devoid of sensation and hence there is no pain in pneumonia unless the membrane covering them is involved in the inflammation. The kidneys are true glands, but are whiter than the ordinary glands—more like the liver. They resemble the testes, but are curved and broader. They contain small cavities like sieves for the percolation of the urine, which are connected with the bladder on either side by canals. There are short and broad veins leading from the liver to the kidneys, by which the matters passing out from the former are evacuated. These veins are straight and give to the kidneys the appear-

*The spirits are not elaborated in Aretæus to the same extent as in the system of Galen, according to which the blood takes up the "natural" spirits in the liver, is laden with "vital" spirits when it reaches the left ventricle and on reaching the brain generates "animal" spirits, which circulate thence by the hollow nerves and subserve the higher functions of the body. (See Foster, Hist. of Physiol., 1901.) Aretæus speaks only of the spirit (pneuma) which is taken in with the breath.

ance of being suspended near the liver (he refers evidently [372] to the renal veins which empty into the vena cava opposite the liver). Jaundice may arise from affections of the kidneys as also of the stomach, spleen and colon.

The stomach presides over pleasure and disgust, by promoting good digestion and good spirits in health and their opposites in disease. A part of the digestion goes on in the colon, which is a thick and fleshy part of the intestine.

The spleen is the strainer of the black blood and the jaundice from it is dark green. It is porous and insensible; often becomes greatly enlarged (*scirrhus*), though seldom suppurating, and is especially subject to disease in marshy localities.

The womb is described thus: "In the middle of the flanks of women lies the womb, a female viscus, closely resembling an animal, for it is moved of itself hither and thither in the flanks, also upwards in a direct line to below the cartilage of the thorax; and also obliquely to the right or the left either to the liver or spleen; and it likewise is subject to prolapses downwards, and in a word, is altogether erratic. It delights also in fragrant smells, and advances towards them; and it has an aversion to fetid smells, and flees from them; and, on the whole, the womb is like an animal within an animal."⁷ Hence, it may be suddenly carried upwards, compressing the lungs, heart, diaphragm, liver, intestines, obstructing the breathing and speech, and compressing the carotids and causing stupor.⁸

The brain is the seat of sensation and the source of origin of the nerves. It also secretes phlegm.

The blood he calls the nutriment of the body—"the food of all parts, the heat of all parts and the color of all parts." And hence, although it is also "the food of inflammation," and we must remove it in that condition, he inculcates the importance of husbanding it as much as possible.

⁷ Adams, *op. cit.*, p. 285.

⁸ In passing, I feel compelled to remark that this description of the uterus by Aretaeus is incomprehensible, being at total variance with his general clearheadedness and common sense. I shall only remark that it was the prevalent opinion on the subject and that it continued such for many centuries.

SUDHOPE

3788.
jahre
With
sch., vo

RILL

3865.
Realis
Repr
pp. 89-

ALL

3987.
seines
With
schr., I

REBI

4114.
Tissot
Bibl.
from vo

ADAM

4908.
(1908).
Illustr
Bull., vo

5617.
Trudea
(1916).
Repor
1916, wi
and H. M
Bull., vo

5662.
of the J
la. 8°.

Repor
with po
1908, no

Mc CA

5869.
la. 8°.
With
Bull., vo

6004.
lifetime
Being
mical I
[Edinb.

On Si
Lister,
Turner,
Med. Jr

KNOT

6013.
study
Madne
logical
Minn.,
Repr.
copy, w

[372] In the enumeration of diseases, we meet with names familiar, as apoplexy, epilepsy, tetanus, pleurisy, pneumonia, hysteria, satyriasis, gonorrhœa, diabetes, icterus, asthma, cholera, phthisis, dropsy, arthritis, dysentery. There are also many unusual or mysterious terms, as phrenitis, lethargy, marasmus, cynanche, causus, ileus, kephalæa, skotoma, pneumodes.

It is important to remember that these names do not always mean what we understand them to mean; some indicate symptoms, some embrace several distinct diseases. The cause of phrenitis is seated in the head or senses. Heart disease is considered under the title, syncope or cardiacs. Affections of the viscera are placed in groups—those “about the liver,” those “about the kidney,” etc. A very curious term for a disease is elephas or elephantiasis, so named from a supposed resemblance to the animal. It is also called satyriasis, leo, morbus herculeus, terms indicative of its magnitude and severity. The account of it begins with a description of the animal. Adams believes it was syphilis, which (under the names lichen or mentagra) was prevalent at Rome in the first and second centuries A.D., and of which descriptions are given in Pliny, Martial and Marcellus Empiricus. It was attributed by these Roman writers to the fashionable practice of salutation by kissing. The whole description conveys the impress of exaggeration which is so foreign to Aretæus, and Sprengel charges him with having yielded here to the temptation to indulge in style and fine writing.*

The causes of disease are various. Cold acts generally, especially in affections of the air-passages, and is assisted by moisture and draughts. It is one of the causes assigned for tetanus. [373] Climate is a factor—that of Egypt produces throat diseases. Season is concerned. Cachexia causes anasarca and phthisis. Food faulty in quality and quantity leads to angina, apoplexy, dropsy, dysentery, ileus, inflammation of the liver. Wine in excess causes angina, apoplexy, inflammation of the liver, paralysis, madness. Medicines may be concerned: cantharides may cause inflammation of the bladder; buprestis (melœ ves-

* Adams, *op. cit.*, p. 370.

catoria), dropsy; mandragora and hyoscyamus, furor, etc. [373]

Instruments may be to blame: the catheter may cause injury and even sphacelus of the bladder. Injuries are often operative: a wound may cause tetanus; blows, falls, etc., apoplexy, abscess of lungs; heat, fishbones, blows, angina or quinsy. Many diseases arise from others, as suppression of urine from a calculus; phthisis from cough, pneumonia, ulcer and hemorrhage of the lungs; dropsy from disease of the liver and spleen, asthma and gout; empyema from pleurisy and pneumonia; disease of the liver from dysentery; tetanus and prolapsus uteri from abortion; paralysis from gonorrhœa; asthma from gout, etc. Suppressed discharges and secretions are often productive of disease. A redundancy of vapors causes disinclination to exertion, weight in the head, noises, flashes of light, etc.

In connection with this mention of the "vapors" by Aretæus, the following *morceau* may be of interest:

The King is subject to vapors—vapors which proceed from the spleen and the melancholic humor whose livery they wear, in the chagrin they impart and the desire for solitude which they engender. They permeate by the arteries to the heart and to the lungs, where they excite palpitations, inquietudes, lassitudes and dyspnœa; from thence proceeding upwards they even reach the brain, and there by disturbing the spirits of the optic nerves, they set up vertigo and swimming of the head, and colliding elsewhere with the nervous principle, cause weakness of the limbs to such a degree that support is necessary in walking, a circumstance very troublesome to anyone, but more particularly the King, who has need of all the head he has in the discharge of the affairs of state. His temperament tending much to melancholy, his sedentary mode of life, his presiding much in councils, his natural voracity, which causes him to eat too much, greatly promote this malady, by reason of the excessive and inveterate obstructions the crudities excite in the veins, which, retaining the melancholic humor, prevent its escaping by the natural passages; and so by their retention give rise to heat, fermentation and tempestuousness; thus there is no reason for surprise that blood-letting so powerfully awakens the disorder, seeing that it is so certain that by the movement it excites in the entire volume of the blood and throughout the veins, it agitates the melancholic humor in its very sources, and without evacuating it aggravates its ebullition and evaporation.—*Journal de la Santé du Roi* (a daily record of the health of Louis XIV, kept by his physicians

SUDHOPE (KARL FR. LUDWIG)

3788.
jahre
With
sch., vo

RIL
3865.
Realis
Repr
pp. 89-

ALL
3987.
seines
With
schr., 1

REB
4114.
Tissot
Bibl.
from vo

ADA
4908.
(1908).
Illust
Bull., vo

5617.
Trudea
(1916).
Repo
1916, w
and H. L
Bull., vo

5662.
of the J
la. 8°.
Report
with po
1908, no

Mc Ca
5869.
la. 8°.
With
Bull., vo

6004.
lifetime
Being
mical I
[Edinb.
On Si
Lister,
Turner,
Med. Jr

KNOT
6013.
study
Madne
logical
Minn.,
Repr.
copy, w

[373] of the Paris faculty by his order for 64 years, 1647-1711).
Molière and his Medical Associations, by A. M. Brown, M. D.,
London, 1897.

Areteaus' fame rests largely upon his pictures of disease.
None of the ancients can compare with him in his power to
portray disease. We lose much of the effect, of course, in
translation, especially in literal translation. His powers of
description are best seen in such affections as tetanus, epilepsy,
hysteria.

"Tetanus is an exceedingly painful spasmodic affection, fol-
lowing a wound, blow, abortion or exposure to cold, and prov-
ing quickly fatal. It begins in the muscles and tendons about
the jaws, extending thence to the whole frame. The convul-
sions bend the body backwards so that the head is lodged be-
tween the shoulder-blades (opisthotonos), or forwards (em-
prosthotonos), or extend it out straight. In all cases the jaws
are locked so firmly that they can only with difficulty be prized
apart. If the teeth be forcibly separated and liquid be then
poured into the mouth, it is not swallowed, owing to the con-
traction of the fauces, but is squirted out or held in the mouth,
or regurgitates through the nostrils. The face is congested
and variously distorted, the eyes are fixed or rolled about, the
cheeks and lips are tremulous, there is grinding of the teeth,
the jaw quivers, there is subsultus of muscles and there is a
painful sensation of suffocation. The urine is retained or
passed involuntarily."

"The paroxysm of epilepsy is preceded by circular flashes
of purple or black, or it may be of all the colors of the rainbow,
or by peculiar sounds, or by a bad smell, or by manifestations
of irritability or anger, or by a feeling of dread, as of an at-
tack by a wild beast. This is followed by contractions, first
involving the thumbs and great toes, and rapidly extending to
the head, when the patient falls suddenly as if struck with a
piece of wood or with a stone, and indeed this impression of
having been maliciously struck down may remain after re-
covery, especially in first attacks.

"When the affection has become habitual, patients realize
from the seizure of a finger or other part that a convulsion is
coming on and call upon those present to bind or stretch such

(1)

part. By such means the attack may be postponed for a time. [373] With the fall the patient becomes unconscious, the hands are clenched,¹⁰ the limbs are stiff or are dashed hither and thither, the head is drawn forward so that the chin rests on the chest, or backward, or to one or other shoulder. The lips are compressed or drawn wide apart, or stretched sideways over the teeth as in smiling. The tongue protrudes from the mouth, incurring the risk of being badly bitten, the eyeballs are rolled inwards, the eyelids for the most part wide apart showing the white and quivering, the cheeks are congested, the eyebrows frowning. Soon the countenance becomes livid and swollen, the vessels of the neck are distended, the patient moans and makes guttural noises as if he were being throttled, foam issues from the mouth, and there is erection of the genitalia. As the attack draws to a close there are unconscious discharges of urine, semen and fæces, and the patient lies pale, torpid, heavy and exhausted. At length he rises up, the paroxysm being ended."

"In hysteria the woman experiences a choking with loss of breathing and speech like that which occurs in epilepsy. There is insensibility and deep stupor. The attack may come on suddenly with a fall. The limbs are seized with jerking, both voluntarily and involuntarily. During the unconsciousness the patient lies as if dead, except that her eyes are bright and not entirely fixed and her color is more ruddy than usual."

He notes the rusty sputa and the crisis on the seventh day [374] in pneumonia, the optimism of consumptives, the vicarious hemorrhage in menstruation. Pain in the shoulder in affections of the liver is noted and ascribed to dragging on the pleura.

The differences between arterial and venous hemorrhage are well described.

The symptoms of phthisis are enumerated as follows: chronic cough, spitting of blood and pus, hectic fever, colliquative sweats, loss of strength and flesh, pallor, loss of appetite, hoarseness, fingers bony, with thickened joints and curved nails, nose slender and sharp, cheeks red with cheek bones

¹⁰ Not "clasped" as Adams has it.

3788.

jahre

With
sch., vo

RIL

3865

Realis

Repr
pp. 89

ALL

3987

seines

With
schr., 1

REB

4114.

Tissot

Bibl.
from vo

ADA

4908.

(1908).

Illust
Bull., v

5617.

Trudea

(1916).

Repo
1916, w
and H.
Bull., v

5662.

of the
la. 8°.Repor
with po
1908, no

Mc C.

5869.

la. 8°.

With
Bull., v

6004.

lifetime

Being

mical I

[Edinb

On Si

Lister,

Turner,

Med. Jr

KNOT

6013.

study

Madne

logical

Minn.,

Repr

copy, w

[374] prominent, eyes brilliant and hollow, lips drawn over teeth as if smiling, muscles of arms imperceptible, not a vestige of the mammae—the nipples only being visible, the ribs showing through the skin, the throat prominent and chest narrow, the joints and bones devoid of flesh, the shoulder blades projecting like the wings of birds, a tendency to looseness of bowels, the whole aspect cadaverous.

The divergence of the tongue in facial paralysis is noted, and caution is inculcated not to mistake the affected for the unaffected parts: “in laughter, speaking or winking, the true state of matters becomes manifest, for the parts affected are all drawn aside with a smack; the lip expresses no smile and is motionless in talking, the eyelid is immovable, the eye fixed, and the sense of touch is lost, while the sound parts speak, wink, feel, laugh.”

One of the most interesting features is the evidence that he practiced physical diagnosis just as we do now, by inspection, palpation, percussion and auscultation.

We see inspection in his observation of the character of the respiration, of the posture, decubitus, etc., of the color, heat and swelling of the surface, the condition of the veins, the tongue, the pulse, the nails, the sputa, etc. We find this *passim* and it is only what we would expect from so careful and acute an observer.

He likewise resorts to palpation, as in enlargement of the liver, “the boundaries of which are distinctly circumscribed, for the hand applied in pressure, after passing beyond the circumference of the liver, sinks down into an empty space in the abdomen.” He notes also “pain on pressure below the false ribs.” He observes the tendency to painless swelling of the spleen, which sometimes extends clear over to the right side, and is as hard and unyielding as stone, causing many observers to be deceived into the belief that it is an affection of the peritoneum. Sometimes the organ floats in the abdomen and can be moved about from side to side. Rarely it suppurates, when it becomes soft and yielding to the touch. He notes a relationship of these cases of enlarged spleen to marshy localities, bad water and the autumnal season of the year. In ascites by strong compression over the lower belly, the fluid

can be made to change its position. In the same condition [374] pressure with the finger leaves an indentation which continues for a considerable time.

The following are examples of percussion: "In tympanites, the abdomen, when tapped, or percussed sounds like a drum." Nor does the flatus shift its place with changes of posture, not even if the part be completely inverted; this is not the case if fluid be present.

After all this, one searches with eagerness to find if there be any mention of the *rhogmoi* or râles described by Hippocrates in diseases of the chest—pneumonia, phthisis, empyema, etc.—and alluded to by Caelius Aurelianus (fifth century A. D. ?) *De Morb. Acut.* II, 10: "Gutturis Stridor quem Graeci *rhogmon* vocant." They are also mentioned by Paul of Aegina, seventh century, under pneumonia and the operation of laryngotomy, and by the Arabian Rhazes, ninth century, and Psellus, eleventh century. We find the term used by Aretaeus in describing the symptoms of asthma, a name which evidently embraced other affections giving rise to dyspnoea, besides that to which we limit it. "Succussion," or the sound elicited by shaking the body, upon which Hippocrates laid such stress in "empyema," a term which simply meant with him pus in the chest, is not mentioned. On the other hand, in enumerating the symptoms of heart disease, we find among them "*a bruit of the heart.*" The Greek word is *πάταγος*—"πάταγος τῆς καρδίας."¹¹ This word is used several times by Homer: *πάταγος ὀδόντων*, chattering of the teeth; *πάταγος ὀξῶν*, crashing of branches against each other in a wood during a storm; *ἐν δ' ἔπεσον μεγάλῳ πατάγῳ*, they fell into the water with a great splashing noise. It is also used by others for the rattling of the wind, for the sounds made by animals and musical instruments, etc. Akin to *πάταγος* are *παταγέω*, *πατάσσω*, *παταγή*, which are employed to express the clapping of hands, the beating of the heart and even thunder.

It is a fact of the highest interest that Aretaeus recognized the murmur of heart disease. And in connection with it we should note that he does not speak of it as an uncommon or

¹¹ Adams, *op. cit.*, pp. 30, 271.

3788.
jahre
With
sch., v

RIL
3865
Realis
Rep
pp. 89

ALL
3987
seines
With
schr., 1

REB
4114.
Tissot
Bibl.
from v

ADA
4908.
(1908).
Illust
Bull., v

5617.
Trudea
(1916).
Repo
1916, w
and H.
Bull., v

5662.
of the
la. 8°.
Repor
with po
1908, no

Mc C.
5869.
la. 8°.
With
Bull., v

6004.
lifetim
Being
mical
[Edinb
On Si
Lister,
Turner,
Med. J

KNOT
6013.
study
Madne
logical
Minn.
Repr
copy, w

[374] striking symptom, one which he had heard on some rare occasion, in some peculiar case. Had this been so, we may rest assured that so careful and conscientious an observer would have so stated. But he includes it among the common symptoms, such as palpitation, vertigo, fainting, pulse failure, etc. And in the same way we may assure ourselves that the murmur of which he speaks was elicited by the application of the ear to the chest. We know that such murmurs are sometimes heard at a distance from the patient, but this is altogether exceptional. Laennec noticed it in several cases, but only at a distance of a few inches. A medical friend heard a loud, humming sound, as he sat by the bedside of a patient, like that of a sewing machine in the adjoining house; he found that it proceeded from an aortic lesion. That such cases are extremely rare I am convinced from a personal experience of over 40 years in hospital, dispensary and private practice, in which I have always given special attention to the heart. The memory is very fallible, yet it is strange that not a single such instance remains impressed upon mine, nor do I find any mention of it in several of our most popular text-books, which surprised me very much, for of course I know there had been [375] such cases. Nor is it strange that so acute a diagnostician as Aretaeus should extend to the heart the method which had enabled him to elicit the *rhogmoi* in affections of the lungs, and with which he was made so familiar by the well-studied writings of his revered predecessor—Hippocrates—the gospel of the medical profession of his day. It is a fact, however, that Aretaeus is the only one of the ancient writers, so far as I know, who auscultated the heart.¹²

¹² Hippocrates called any collection of pus within the chest empyema. Abscesses of the lung were not infrequent, according to him. Their discharge gave rise to vomicae or cavities. This discharge might occur in either of two directions: 1, into the bronchi, followed by expectoration; or 2, into the pleural cavity. The former he considered a fortunate issue. Hippocrates does not say, as has been affirmed, that succussion is a constant symptom of pus in the chest. We know that it does not occur in simple collections of water or pus in the pleura. It is, however, common in pneumo-hydro and pneumo-pyothorax and according to Laennec may be heard in large cavities half filled with fluid. Hippocrates

The therapeutics of Aretaeus are copious and varied, offering a striking contrast to Hippocrates who has comparatively little to say on medical treatment. In the classification of his remedies we find acids, alkalis, stomachics, antidotes, calefacients, refrigerants, emetics, purgatives, astringents, stimulants, diuretics, nervines, etc., and locally venesection, leeches, cups, clysters, friction, massage, sternutatories, gargles, cataplasms, fomentations, epithems, blisters, ointments, baths, arteriotomy, the catheter, the cautery, irritants, hemostatics, etc. Some of his individual remedies are: absinth or wormwood, a stomachic; dates, an astringent; Samian and other earths, galls and starch, coagulants; wine, a stimulant (not to be used in inflammations); castor and asafœtida, nervines; cantharides used in making blisters; spiders' web, a hemostatic,

noticed that it was absent where pus was retained (true empyema), for he says: "Those who are full of pus yield no sound." This seems to point to his success in its practice as being due to the fact that he applied it in conditions where air was present. Yet he does not appear to have been aware of the condition pneumothorax (Laennec). It is interesting to note that between 1819 and 1826—about 6½ years—Laennec found the symptom succussion in 30 cases and also knew of many other cases in the hospitals of Paris. Hippocrates describes succussion as follows: "Having placed the patient in a firm seat, cause his hands to be held by an assistant and then shake him by the shoulder in order to hear on which side the disease shall yield a sound." *De Morbis*, II, 45. That Hippocrates did actually apply his ear to the chest is clearly stated, for in the treatise *de Morbis*, II, 59, in speaking of diagnosticating collections of fluid within the chest, he uses these words: Πολλόν χρόνον προσέχων τό οὖς πρὸς τὰ πλευρά. This passage seems to have entirely escaped the observation of his successors. Even Laennec had read these words without heeding them. May not the great discovery of the latter have been due more to the words of the great father of medicine still echoing through the chambers of his brain, "applying the ear to the chest," rather than to the happy accident or inspiration to which he ascribes it? In evacuating fluid when it protrudes between the ribs, Hippocrates says the incision should be made low down, "at the point where the râle is heard"—ὅπη ἂν ψοφέη.¹³ Hippocrates is said also to have practiced percussion; I am not able as yet to verify this statement.

¹³ *De Morbis*, Lib. II, Sec. 5 (Foës' Edition, Vol. I, p. 483).

3788.
jahre
With
sch., v

RIL

3865
Realis

Rep
pp. 89

ALI

3987
seines

Witl
schr.,

REB

4114.
Tissot

Bibl.
from v

ADA

4908.
(1908).

Illust
Bull., v

5617.
Trudea

(1916)

Repo
1916, w
and H.
Bull., v

5662.
of the
la. 8°.

Repo
with p
1908, n

Mc C.

5869.
la. 8°.

With
Bull., v

6004.
lifetim

Being
mical

[Edinb

On S
Lister,
Turner,

Med. J

KNOT

6013.
study

Madne
logical

Minn.

Repr
copy, v

[375] used in checking hemorrhage from leech bites, etc.; mustard, an irritant; hiera of aloes, and hellebore, purgatives—white hellebore expelling yellow bile and black hellebore, black bile. He uses various sorts of baths, hot, cold, sea, sand, sulphurous, etc., and recommends various forms of exercise, active and passive, chironomy, walking, leaping, riding, sailing, vociferation, massage, throwing the *halteres*, etc.

In the treatment of disease, venesection fills a very prominent rôle. There is hardly a disease in which it is not recommended. Believing the "blood is the pabulum of inflammation," which is a very frequent condition, it is quite natural to attempt to check disease by removing it. Aretaeus is always cautioning, however, against its too free loss. The quantity to be drawn is to be regulated by the strength. It is difficult to determine the amount and mistakes are easily made. If you take too much you dispatch your patient, "for blood imparts vital heat to the body and to the food." It is better to err on the side of smallness, for if you have not drawn enough, you can open a vein again. In some cases venesection is urgently called for as in pleurisy and pneumonia. In the latter blood should be taken from both arms at once, so that revulsion of the humors may take place from both sides of the lungs; but we must not carry it to *deliquium animi*, for that co-operates with the "suffocation." For if the exciting causes be from the blood the venesection removes them, but if from phlegm or froth or any other of the humors, the evacuation of the veins widens the area of the lungs for the passage of the breath. In affections of the heart we must take much less than in any other case, for here even a slight mistake will send a patient to Hades. The greater the disease the more imperative does the great remedy—*μέγα βοήθημα, μέγα ἄλυσ*—as he calls it, become. This applies to those affections which involve the brain—apoplexy, kephalæa, epilepsy. Epilepsy was especially subjected to heroic measures. "Whatever is great and most powerful is needed for epilepsy. Blood is to be taken from the veins at the elbow, the straight vein at the forehead, and by cupping, but still not to the extent of *deliquium animi*, for that has a tendency to induce the disease. The arteries before and behind the ears are to be opened

(1)

or portions of them excised, and purgings, which are still more [375] potent measures, are to be produced by medicines which draw off phlegm from the head." The medicine should be particularly powerful, for the habits of such persons renders them tolerant of pains and their goodness of spirits and good hopes render them strong in endurance. Blistering the head with cantharides and even trephining the skull are recommended. He enunciates the same doctrine under the disease elephas (elephantiasis): "the remedies ought to be greater than the disease in order to procure relief."¹⁴ I believe ileus is the only disease in which bleeding *ad deliquium animi* is recommended [376] by Aretaeus.

Cupping is often to be preferred to venesection, having the advantage of not reducing the strength. Both dry and wet methods were used, the former acting by revulsion of matters from within. In protracted apoplexy blood should be abstracted unsparingly from the back of the neck. The benefit from cups was especially marked in pleurisy.

Unusual forms of venesection were those from the lingual veins—the tongue being pressed upwards against the roof of the mouth—in obstinate cases of inflammation of the throat, which, if the blood flows freely and copiously, proves more effectual than all other means; from the nostrils in head affections by means of a long instrument called *κατείδδιον* or by a *τορόνη* (a sort of scoop), which is thrust into them, or if these be wanting, by a goose quill, made rough at the end like the teeth of a saw, which is pushed down to the ethmoid cells and the veins there roughly scratched or scarified; and from the veins of the forehead, pubes, ankle and back of the hand.

Next to venesection and cupping came purgatives, among which the most powerful were elaterium, the hiera of aloes,

¹⁴ "Well, in my opinion, did Aretaeus, the Cappadocian, say that the power of remedies ought to be greater than those of diseases; and that for this reason elephantiasis is incurable, because it is impossible to find a medicine more powerful than it. For if cancer, which is, as it were, an elephantiasis in a particular part, is ranked among the incurable diseases by Hippocrates himself, how much more is not elephantiasis incurable, which is, as it were, a cancer of the whole body."—*Paulus Aegineta (Adams)*, II, 1.

3788.
jahre
With
sch., v

RIL

3865
Realis
Rep
pp. 89

ALI

3987
seines
Witl
schr.,

REE

4114.
Tissot
Bibl.
from v

ADA

4908.
(1908).
Illust
Bull., v

5617.
Trude
(1916)
Repe
1916, w
and H.
Bull., v

5662.
of the
la. 8°.

Repo
with p
1908, n

Mc C

5869.
la. 8°.

With
Bull., v

6004.
lifetim
Being
mical
[Edint

On S
Lister,
Turner,
Med. J;

KNOT

6013.
study
Madne
logical
Minn.
Repr
copy, v

[876] and hellebore. The last named was a sort of *dernier resort*; if all other remedies failed in chronic diseases, the white hellebore was the only cure. In first attacks of gout it was "the great remedy."

Clysters were used to evacuate the bowel and to produce revulsion of humors from the head, chest, etc., in affections of those parts. There were two sorts of clysters—as mentioned under quinsy—one, the common clyster, to bring away feculent matter; the other to produce revulsion of the humors.

I will now give some details of treatment of individual diseases.

Dropsy is relieved by hydragogue purgatives, sweating and diuresis. Tetanus is treated by asafœtida. Soothing fomentations are applied in pleurisy. In spitting of blood he recommends ligatures to the arms and legs by broad bands firmly applied, which appears to indicate that he understood the direction of the blood-flow in the veins.¹⁵

In heart disease, "the patient must be stouthearted and courageous, and the physician must encourage him with words to be of good cheer and assist with diversified food and drink. . . . Let him lie in cool air and in a house having a northern exposure, and if the cool breeze of Boreas breathe upon him" [he is here quoting from Homer, where he speaks of wounded Sarpedon]¹⁶ "it will refresh his soul sadly gasping for breath." The prospect should be towards meadows, fountains and babbling streams, for the sweet exhalations from them, and the delightful view will warm the soul and refresh nature. And, moreover, it is an incentive to eat and drink. But if, from want, one is not fortunate enough to

¹⁵ It is one of the strangest things in all medical history that for centuries physicians were bandaging the arm in practicing venesection and yet never realized the direction of the blood current in the veins. Even Harvey's teacher, the Paduan anatomist, Fabricius ab Aquapendente, although he wrote a work on The Valves of the Veins, believed that the blood flowed from the heart to the extremity, although it distends the veins on the *distal* side of the bandage. In his opinion the valves were designed to delay the blood and prevent the whole of it flowing at once to the hands or feet and becoming collected there. See Foster, *op. cit.*

¹⁶ Il. V, 697.

(1)

possess these things, we must make an imitation of the cool [376] breeze, by fanning with the branches of fragrant boughs, and if the season be spring, by strewing the ground with such leaves and flowers as are at hand." And then he enumerates other measures to be employed and concludes: "By these means the patient is to be brought back to convalescence and his accustomed habits."

In phrenitis, sleep is to be secured by the application of poppy fomentations and by stroking the temples and head.

He treats phthisis by life at sea, "for the sea-water contributes something desiccant to the ulcers," by riding, by anointing with oil, by milk, whose praises he sounds in strong language, and by raw eggs.

In epilepsy he considers diet very important. No flesh is to be allowed. Castor is the best remedy. He has never tried the brain of a vulture, the heart of a raw cormorant, and the weasel, alleged remedies. He has seen persons holding cups beneath the wound of a man recently slaughtered and drinking thence draughts of human blood. "O the mighty necessity," he exclaims, "which compels one to practice such a wicked abomination. And whether even then they recovered, no one could tell me for certain. There is another story of the liver of a man being eaten. However, I leave these things to those who care to try them."

There are few allusions to surgical operations, but enough to make us realize how much we miss by the loss of his work on that subject. He refers to this treatise in connection with some remarks on abscess of the liver and its treatment. He recommends urethrotomy for stone impacted in the neck of the bladder. In suffocative quinsy, which is evidently laryngeal diphtheria, he is opposed to tracheotomy, "for the heat of the inflammation is increased by the wound, and thus contributes to the suffocation and cough; and, moreover, should the patient be so fortunate as to escape, the lips of the wound will not coalesce, being cartilaginous and of a nature unfavorable to union."

Some of his sentences are epigrammatic, recalling the terseness and force of the aphorisms of Hippocrates: "It is impossible to make all the sick well, for the physician would in

3788
jahre
Wit
sch., v

RIL

3865
Realit

Rep
pp. 89

ALI

3987
seines

Wit
schr.,

REF

4114
Tissot

Bibl.
from v

ADA

4908.
(1908)

Illust
Bull., v

5617
Trude

(1916)

Repe
1916, v
and H.
Bull., v

5662.
of the
la. 8°.

Repe
with p
1908, n

Mc C

5869.
la. 8°.

With
Bull., v

6004
lifetim

Being
mical

[Edini

On S
Lister,

Turner
Med. J

KN01

6013
study

Madn
logica

Minn

Rep
copy,

[376] that case be superior to the gods; but the physician can secure respite from pain and intervals in disease, and can render diseases latent." "Few escape from dropsy, and they more by fortune and the gods than by art; for all the greater ills the gods only can remedy." "For the strength of nature produces health, but her weakness disease." "This is a mighty wonder, that, in hemorrhage from the lungs, which is particularly dangerous, patients do not despair, even when near their end. The insensibility of the lungs to pain appears to me to be the cause of this; for pain even when slight makes one fear death. In most cases pain is more dreadful than pernicious, whereas the absence of it, even in serious illness, is unaccompanied by fear of death and is more dangerous than dreadful."

"One must be fertile in expedients and not be satisfied to apply his mind entirely to the writings of others." "Experience is a good teacher, and one ought to try experiments, for too much caution results in ignorance." "If you give a medicine at the height of the dyspnoea" [he is writing of pneumonia], "or when death is at hand, you may be blamed for the patient's death by the vulgar." "To those who suffer such pains" (in ileus), "to die is happiness, yet it is not permitted to the reputable physician to impart it. However, at times, it is permitted to lull the patient asleep with narcotics and anæsthetics, when he foresees that there is no escape from the evil." "When these things are done, if the disease does not yield, the patient's condition is hopeless." "If he vomit up everything" (in cholera), "if the sweat be excessive, if he become cold and livid, if his pulse be almost imperceptible and his strength be exhausted, it will be well to try to make one's escape with credit." I could give many such passages.

His regard for the patient's comfort is shown in the following, which also conveys an important practical therapeutic hint: "Inunctions are more agreeable and efficacious than fomentations; for an ointment does not run down and stain the bed clothes—a thing very disagreeable to the patient—but it adheres, and being melted by the heat of the body, is absorbed. Thus its effects are persistent, whereas liquid preparations run off."

(1)

3788

jahre

Wit

sch., v

RII

386

Real

Rep

pp. 80

AL

398

seine

Wit

schr.,

REI

4114

Tissot

Bibl

from v

ADA

4908

(1908)

Illus

Bull., v

5617

Trude

(1916)

Rep

1916, v

and H.

Bull., v

5662

of the

la. 8°.

Rep

with p

1908, n

Mc C

5869

la. 8°.

With

Bull., v

6004

lifetin

Being

mical

[Edin

On S

Lister,

Turner

Med. J

KN07

6013

study

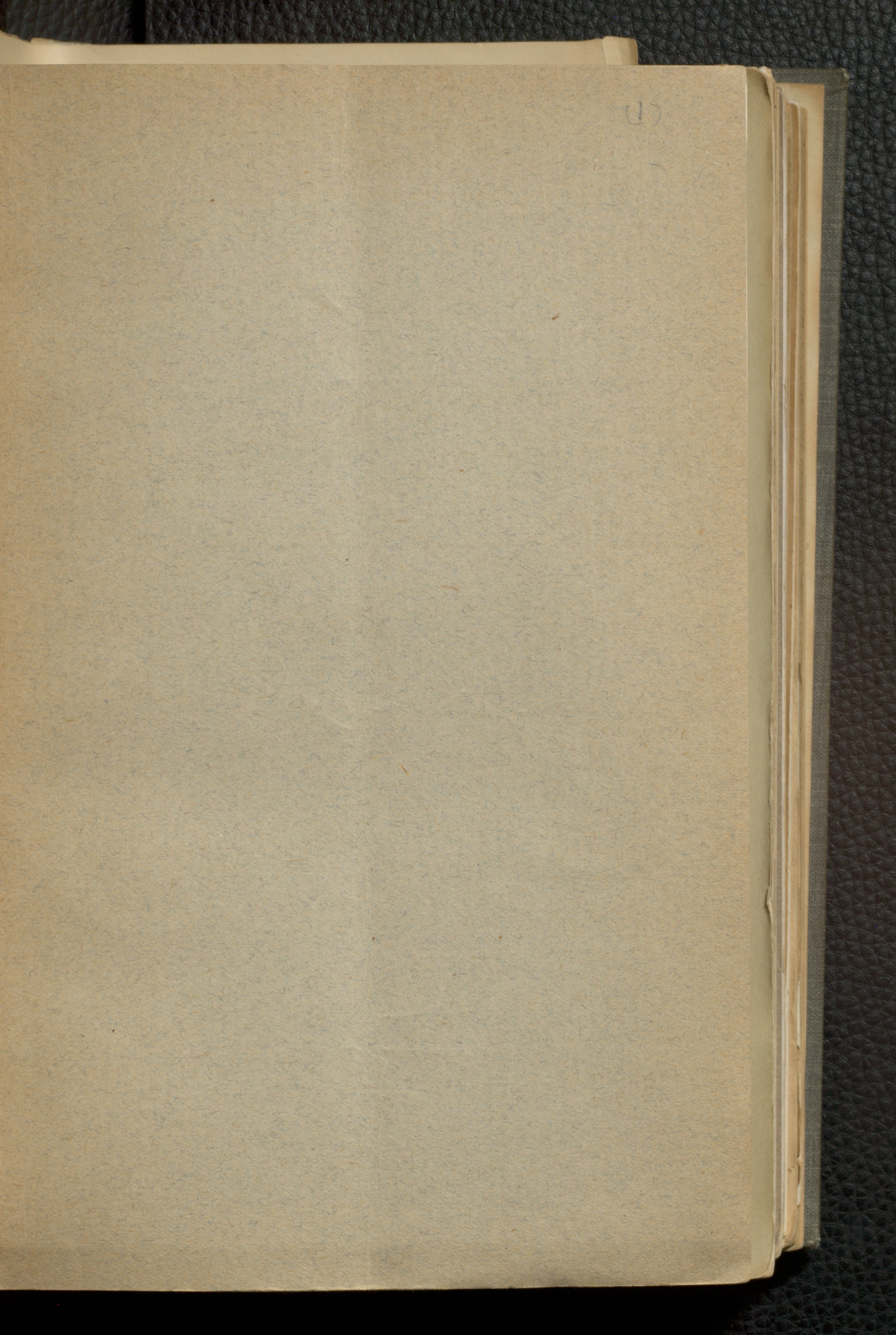
Madn

logica

Minn

Rep

copy,



378
jahre
Wi
sch.,

RI
386
Real
Re
pp. 8

AI
398
seine
Wi
schr.,

RE

411
Tisso
Bib
from
AD.

490
(1908
Illu
Bull.,

561
Trud
(1916
Rej
1916,
and H
Bull.,

566
of the
la. 8°.

Rep
with j
1908,

Mc
586
la. 8°
Wit
Bull.,

600.
lifetin
Being
mical
[Edin

On
Lister
Turne
Med.

KNO

601:
study
Madi
logic:
Min
Rej
copy,