low specific gravity and of paler colour, with a diminishing amount of albumen and decrease of dropsy, are amongst the earliest signs of amendment. Albuminuria is usually the last symptom to disappear. The time of its disappearance varies, in different cases of recovery, from a few days to many months. If the urine continue albuminous for more than six months, it becomes more and more doubtful whether it will ever cease to be so; but I have seen cases of complete recovery after albuminuria had continued for one, two, and even three years. So long as the urine continues albuminous, in however slight a degree, although the dropsy and all other general symptoms may have passed away, recovery must be considered incomplete. Acute Bright's disease, although, as a rule, a curable, is not unfrequently a fatal disease. There are some symptoms and complications which indicate a case of more than ordinary peril; such as a very scanty secretion of highly albuminous urine; frequent and distressing vomiting; great anasarca, with a tendency to erysipelatous inflammation of the skin; dropsical effusion within the chest, either in the pleura or the pericardium, or both, with urgent dyspnoea; inflammation of the lung, or pleura, or pericardium, or endocardium; severe and persistent headache, which is apt to be followed by convulsions and by coma, with a brown and dry tongue. All these are symptoms of grave, though not always of fatal, import. When the renal disease is acute, and therefore essentially curable, recovery sometimes occurs after the most formidable symptoms of uræmic poisoning have been present.

A consideration of the exciting causes of the renal disease forms an element in the prognostic indications. When Bright's disease results from [some inherent constitutional defect, without obvious exciting cause, it is generally more intractable than when it is directly due to exposure to cold or to the influence of some specific blood-poison, as, for instance, that of scarlet fever or erysipelas. To all general rules of this kind there are exceptions, and each case requires a separate and careful study.

Let me impress upon you one point of practical importance. Before you pronounce a patient to be entirely free from his malady, be careful to test the urine, not only after rest and fasting—*i. e.*, in the morning before breakfast—but after food and exercise. Albuminous urine is usually more copiously so after food and exercise; and you will sometimes find that, while the urine before breakfast is quite free from albumen, that which is secreted after a meal is decidedly and even copiously albuminous. In some cases, exercise has even more influence than food in exciting renal congestion and albuminuria.

An attack of acute Bright's disease confers no immunity from future attacks; on the contrary, the disease may occur more than once in the same subject, a result either of inexplicable predisposition or of a liability resulting from a first attack. I think my experience warrants the statement that when acute albuminuria has resulted from some non-specific cause, such as exposure to cold and wet or excessive eating and drinking, it is more likely to recur than when it has been excited by a specific morbid poison such as that of scarlet fever, which, as a rule, does not occur a second time in the same individual; but I have known patients so unfortunate as to have two attacks of scarlet fever, and each attack complicated with albuminuria. I shall defer the important question of treatment until we have passed in review the various forms and complications of chronic Bright's disease.

NOTES TOWARDS THE HISTORY OF THE MEDICAL STAFF OF THE ENGLISH ARMY PRIOR TO THE ACCESSION OF THE TUDORS.*

By W. R. E. SMART, C.B., M.D.,
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OUR military medical history commences with the third Roman invasion, when the Emperor Claudius, A.D. 43, landed in Kent, took command of the army of Aulus Plautius, crossed the Thames, and took Camalodunum (Colchester) by siege. In the following year the Senate decreed him a triumph, and conferred on him the title of Britannicus, to be inherited by his then infant son, and gave honours to his military followers. Amongst these was Scribonianus Largus, *medicus*, who, it may be presumed, shared in those honours and privileges, and who made for himself literary renown also. He wrote a treatise *On the Composition of Medicines*, containing about three hundred formulæ, among which it has been surmised there may have been some remedies of which he gained a knowledge in the campaign in Britain. His treatise was held in high repute, and a century later Galen introduced several of his formulæ in his writings.

A sadder reminiscence rests on the name of another Roman military *medicus* who served in Britain. In the ruins of Chester-in-the-Wall (anciently Bercovicus, a first-class station) there has been found a mortuary stone, six feet high, bearing this inscription: "Sacred to the infernal Gods. To Anicius Ingenuus, *medicus* in ordinary of the first cohort of the Tungrian Legion. He lived xxv years." This Tungrian (Tongres, *hodie*) legion was recruited on the banks of the Maese in Belgic Gaul, up to Spa, then as now famous for its mineral waters. It marched north under the Emperor Severus A.D. 207, and had the guardianship of Bercovicus entrusted to its first cohort, which recorded, in a tablet that has been found, that it constructed a thousand paces of the wall.

We know that whatever the nationality of a Roman legion, its officers were Romans of family rank; and this *medicus* who died so young must have been, from his name—Anicius Ingenuus—a man of good descent. In early manhood he was *medicus* of the first cohort of a celebrated Roman legion, which, consisting of 1,100 men, was of double the strength of the other cohorts. They led the van in battle, and guarded the eagle—the standard of the legion—and of these it was said by Cicero, "His divina et presentia signa venerantur." From this incident of the regard in which the young *medicus* was held by his cohort, may be inferred the carefulness of the Romans in appointing their military *medici*, who, like our own, stood in the double capacity of physician and surgeon to their corps.

Britain was to the Romans a far more difficult possession to conquer and to hold than India has proved itself to be to us modern Britons, for throughout an occupation of three hundred years its tenure was "by the sword". Among the Roman emperors, Caesar, Claudius, Vespasian, Adrian, Severus, Caracalla, Constantius, and Constantine the Great, owed much of their military reputation to their services in Britain, which shows the importance of that command; and Great Britain is indebted to Indian warfare for the training of many of her most famous generals. The sculptured stones that tell of the Roman occupation are highly treasured by modern Britons. Whatever may be the duration of our hold on India, it is open to doubt that, after a lapse of fifteen hundred years, there will remain such a sculptured testimony erected by the officers and men of his regiment to tell of their regrets and of the worthiness of any of the hundreds of medical officers who have fallen at their posts in the acquisition or defence of the British Indian empire as that which which still remains in memory of Anicius Ingenuus, the young Roman military *medicus*. Happily, time, the destroyer of all things, has not erased the monument to him erected by the first cohort of the Tungrian legion.

Our Saxon forefathers were a very martial race, every freeman being a "weaponed man" born to bear arms, dishonoured in appearing without his sword, having the inherent right of private feud, and of maintenance in just quarrels by his kindred and neighbours; and he was bound to serve the king in defence of his kingdom for any term the occasion might require. Of their military organisation and customs, very little further than this is known.

Leechdom, or the art of healing, from the Saxon word *læc*, meaning, according to Ernest Schulze, a physician, was much esteemed in Saxon England, and it was always combined with the priestly office. *Domesday Book* does not give us the name of a single Saxon *medicus* possessing land under Edward the Confessor; but, among the tenants *in capite* under the Conqueror, there is the name of one Aluric, possessing an estate in Hampshire. The land in his possession was also before the Conquest in that of an Aluric, a common name among Saxon landowners, and we may infer that he inherited one of his numerous family estates, if he were not the individual who had been deprived of the greater part of them at the Conquest.

The respect in which the art of medicine was held is displayed in the ecclesiastical canons of the reign of Edgar (959-975 A.D.), wherein analogies are drawn between spiritual sins and bodily diseases. Penitence is likened to medical treatment under a skilful leech, and its results to the action of a "vomit" in expelling a deadly poison; and it is decreed that confession should be made under this formula: "I confess to Almighty God, and to my confessor, the *spiritual leech*, that", etc. These are appeals to the mind of a rude race, made through the known to the unknown, such as our missionaries may employ now: they show how closely medicine was affiliated to theology. One of the primitive duties of Christianity was the care of the sick, maimed, halt, and blind; and up to the twelfth century the art of curing lay in the province of the church. Its *materia medica* consisted of simples; and more cures were effected by altered regimen, by visits to holy wells, and by faith, than by medicaments, some of which were of disgusting or of revolting nature, strangely mixed up with pagan charms, magical arts, superstitious prayers, and offerings to the clergy.

Our knowledge of medical affairs among our Saxon forefathers has

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been elucidated of late through the liberality of the government in providing editions of the literature of that age. Thus we are in possession of an interesting work on *Leechdoms, Wortcunning, and Starcraft of Early England*, collected and edited by the Rev. Oswald Cockayne, M.A. Cantab., which reflects a strong light on the personal habits, social and domestic customs and practices, and on the state of morality, prevailing among the Anglo-Saxons. We find that even in that age of darkness those who were the *literati* were also the *healers*, and that they pretended to an acquaintance with the writings of the Greek physicians. In their history of medicine they assigned to Apollo the art of surgery; to Æsculapius the art of curing internal disease; to Asclepias the clinical observation of maladies, and the logic or art of reasoning thereon; to Hippocrates the teaching diagnosis of diseases; after whom Plato and Aristotle rendered all consistent by the theory of four temperaments, corresponding to the four natural elements.

Of their practice, we may best judge by some of their prescriptions; thus for fever, it is recommended "to take a snail and purify him, and take the clean foam, mingle it with woman's milk, give it the man to eat, it will be well with him." No diet can excel this in its primitive simplicity. For "nyctalopia" (that is cataract): "The men who are unable to see nothing after sunrise till he again go to his setting; take a knee-cap of a buck, and roast it, and when the roast sweats, then take the sweat and smear the eyes therewith, and after let the blind eat the same roast; and then take a new asses tord, and squeeze it, then let them take the ooze and smear the eyes therewith, and it will soon be better with them." These are fair examples of the Saxon *materia medica* used by the clerical leeches, which probably embodies the foulest charlatanry that has ever defaced the practice of medicine. We would expect to find a rational empiricism or practice based on rational experience, that leads to a reliance on specifics; but of these there is only to be discovered an acquaintance with one—that of sulphur and tar for the itch: "Against *handworms*—ship tar, brimstone, pepper, white salt; or wax, brimstone, and salt; mix and smear." They knew the *acarus*.

In primitive society throughout all ages, barrenness in women and the want of virile power have been regarded as among the greatest afflictions of humanity; and the Saxon priestly leech did not deem these matters unworthy of his study, nor indeed others which are more fitly consigned to the arcana of the mere voluptuary, the whole of which were dealt with in the plainest Saxon terms, without the decent intervention of a dead language.

Where medicine was in this condition, it is certain that surgery would also be debased and in darkness. Of operative surgery beyond phlebotomy there is no trace; but of the mode of dealing with a fracture there is an instructive description in these words: "If shanks be broken, take bone-wort, pound it, pour the white of an egg out, mingle these for the shank-broken man. For a broken limb, lay this salve on the broken limb, and overlay it with elm-rind; apply a splint again; always renew these till the limb be healed. Clean some rind and take linseed, grind it for a brewit or paste with the elms drink; that shall be a good salve for a broken limb."

This portrays the employment of demulcent cataplasms, of albumen (for collodion) to close a wound of the integuments, fortified with a backing of the soft inner bark of the elm (for lint), the use of splints; and it counsels the assiduous use of the means until the fracture has united. This assures us that the art of "bone-setter" was advanced in the Saxon age; but the treatment of wounds was not equally regulated by common sense, judging by that recommended for man and his domestic animals, who were much cared for in this ancient leechcraft. Thus, "for wounds that swell", or become inflamed, "take furze and pound it, and lay it upon the swollen part, and it shall soon subside." Again: "If a horse or other beast be shot" (that is with an arrow), "take a seed of dock and scotch wax, let a mass-priest sing twelve masses over them, and add holy water, and put that on the horse or on what cattle soever it may be. Have the worts always with thee." This at least is certain, that the resinous covering would benefit the wounded animal, and the reading or singing the masses would bring their "honoraria" to the ecclesiastical leech.

We may infer from these receipts what means were employed in the treatment of arrow-wounds and of contusions received in battle. The alienation of the art of curing from the priestly office began in our Saxon era, when the fourth Lateran Council (993 A.D.) prohibited the regular clergy from doing any operations of surgery "involving the shedding of blood", and assigned manual operations to seculars and clerks.

Surgery, then, underwent some social degradation, which laid the foundations of its freedom from priestly interference, and tended eventually to its becoming a science. Medicine was not disassociated from theology before 1131 A.D., when the sixth Lateran Council forbade monks and regular canons the study of civil law and medicine. This

was in the reign of our Henry I; and it was about that time, according to Colliette, that in France practitioners were called "myres", by which appellation they were popularly known through several centuries; and the title appears in England in the reign of our glorious monarch, Edward III. Two derivations of the title myre have been advocated: Latin, *mirus*, admirable, extraordinary; and Greek, *myron*, unguentum; hence *myropicus*, an ointner; and *myropolos* an apothecary. It is possible that this new title originated with the institution of lay practitioners, after the decree of the sixth Lateran Council; and I am inclined to an opinion that they were a class that combined again the practice of medicine with that of surgery, as among the Romans.

About this epoch the revival of learning produced Latin editions of Hippocrates and Galen, whose works becoming familiarly known in the west of Europe, a demand arose for the drugs of the Levant. The student of those authors obtained the reputation of knowing the laws of Nature (*φύσις*), and of being able to assist her operations, from which they assumed the new designation, "physicians"; while the change in practice from the use of indigenous simples, which every rustic could distinguish, to that of the Eastern drugs, called for a new order in the profession, to import, store, and dispense these costly and potent agents: thus arose the apothecary, whose office was previously unknown in Western Europe, and not in England before 1300 A.D.

The technical titles employed at this dawn of the modern medical profession were those of physician, mire or myre, and apothecary—the antecedents of academical titles and distinctions of the baccalaureate and doctorate, which were first conferred in France in 1140 (Louis VII), and in England in 1207, in the reign of John. The title of "Surgeon" first appeared in English history when Edward I invaded Scotland in 1299.

In addition to these subdivisions of the medical profession, there arose another in the Middle Ages out of the numerous body of the tonsorial craft, whose vocation, being centred among the communities of the shaven priesthood, obtained from it the reversion of surgery at the end of the tenth century. The barber, being dexterous in the use of cutting instruments, naturally enough assumed the position which the priest was called on by canon law to surrender; and so long as the art of surgery was comprised in bone-setting, tooth-drawing, cupping and blood-letting, and anatomy was untaught as the basis of surgical science, his facility of manipulation and habits of rendering personal services gave the special training by which the ambitious barber might hope to obtain repute as a surgeon. The "myre", as the representative of a higher class surgeon-apothecary, did not flourish in England as he did in France, and the doctor of medicine, who had taken the place of the ancient priest-doctor, regarded the manipulations of surgery as undignified; thus the barber-surgeon rose into repute in the city of London, and municipal privileges being secured to his craft A.D. 1376, the corporate body gained importance, attracting to itself those who purposed to practise surgery alone.

Surgery formed its alliance with barberdom on account of manual accomplishments and civic wealth. The union was not a happy one, as surgery was impatient of the yoke, which, while conferring municipal substantial benefits, disparaged purely surgical acquirements. Yet a separation was not effected until the middle of the eighteenth century, after union in some form or other since the fourth Lateran Council, A.D. 993. So slowly do corporate rights give way.

This cursory recapitulation of the status of the medical profession will throw light on my subject—the history of military surgery.

Nothing whatever is known of those who, in the capacity of healers, attended on our warlike kings, or followed their armies in the field, prior to the Conquest.

From *Domesday Book*, which dates from twenty years after the battle of Hastings, it is learned that there were in the train of the Conqueror two medical attendants—Gilbert Maminot, presbyter and *medicus*, and Nigellus, *medicus*—both of whom stood among those possessing estates by gift of the Conqueror.

The first of these was a cleric of noble family, whose chief—another Gilbert—was enfeoffed in the barony of Maminot of twenty-four knights' fees, and was one of the eight trusty barons charged with the maintenance and defence of Dover Castle, the most important fortress in the land. Gilbert Maminot was the king's chaplain also, and, as an ecclesiastic, he was deterred from surgery by the fourth Lateran Council edict, and therefore it may be inferred that he did not follow his military movements in the field. It is even probable that he was more in attendance on the Conqueror's queen than on himself, for we find that Gilbert the "presbyter" was tenant *in capite ex dono regina* of an estate in Hidincforth Hundred in Essex, and that he does not appear to have held any lands *ex dono regis* prior to his installation as Bishop of Lisieux in Normandy, which see was conferred on him by William in 1077 A.D. In *Domesday Book* he appears tenant *in capite* as "Gisle-

bertus, episcopus Lisiacensis", for an estate in Gloucester, with which, we may infer, he was invested subsequently to his installation, while the gift of the queen was made to him previously to that, unless there were two priests, "Gislebertus" by Christian name, among the royal followers, one of whom held only clerical, and the other both clerical and medical, position in the retinue.

Nigellus* was a layman, I believe, and his name I now propose as that of the first surgeon in English military history. He stands as the Baron Larrey of his day, following the fortunes of the Conqueror of England. He appears in *Domesday Book* as tenant in capite of estates in Hants, Wiltshire, Hereford, and Shropshire, with which he must have been invested in reward of his services in the capacity of *medicus*, and, it may be inferred, in the special branch surgery, which it was not lawful for ecclesiastics to practise. His first two possessions in Hants and Wilts may have been given immediately after the Conquest in the first distribution of lands; but the last two must have been of later acquisition, as the subjugation of that part of England was effected at a later date, and the Conqueror could not have conveyed to his followers any lands of which he was not the actual lord by conquest, and by disposition of their Saxon owners.

It may be inferred that, as soon as William had completed the successive subjugation of the provinces, the lands were distributed among those who were present, according to the estimate of services rendered, and that these estates in Hereford and Shropshire were the reward of Nigellus on the conquest of the Welsh Marches, and that possession was given by "seizin", or on the spot. Nigellus was possessor of other estates, which, not being of regal gift, must have been by feof of the great barons, who subdivided their large grants from the king among vassals on military tenure. These estates must have been the reward of professional services to the donors; and Nigellus, not unmindful of the church, although himself a layman, endowed the church of Monteburgh with an estate of this kind, situated in Somersetshire.

From these unquestionable data, it may be inferred that the profession was well represented and well rewarded at the conquest of England; and in them we possess the historical proof of the value placed on military services by one of the greatest generals and sovereigns in universal history, whose descendants still possess, after the lapse of eight centuries, the throne he acquired, now giving laws to the widest empire the world has known.

After the completion of the great event on which all the subsequent history of England turns, "we know", as Hallam tells us in his *History of Europe during the Middle Ages*, "that the Conqueror distributed this kingdom into about sixty thousand parcels of nearly equal value, from each of which the services of a soldier were due. He may possibly have been the inventor of this politic arrangement". The service due to the king was limited to forty days in the year, after which it was continued at the expense of the crown. As military service was thus rendered feudal and but of short duration, medical services, it may be inferred, were of the same nature, and if any were required they were provided by the great barons for their feudal contingents. Doubtless the Norman kings were attended by their selected professors of the art; but as the privy expenses of the courts of these kings have not come down to us, nothing whatever is known of them. As, however, in their next appearance in our history they continued to be of continental extraction, so it may be inferred they were so in the blank interval.

[To be continued.]

THE PATHOLOGY OF SICK-HEADACHE.

By P. W. LATHAM, M.D., F.R.C.P.,

Physician to Addenbrooke's Hospital; formerly Assistant-Physician to the Westminster Hospital, etc.

DR. ANSTIE, in his paper in the *JOURNAL* of January 18th, gives no reason for his belief "that the sympathetic phenomena in migraine are mere secondary matters," but states that the views of Du Bois Reymond and Möllendorff "are rejected upon grounds which will be found stated at length in the chapters on 'Pathology' and on 'Complications' in his book on *Neuralgia*." I have carefully read over these chapters, and unfortunately fail to see the force of his reasoning; in fact, Dr. Anstie himself must have felt it inconclusive, for he says (pp. 120-121): "Nor, indeed, should I greatly care if it were finally de-

cided that migraine and clonus should be separated from the true trigeminal neuralgia, provided the following points were well impressed on the minds of practitioners." Now Dr. Anstie says "the essential seat of every true neuralgia is the posterior root of the spinal nerve in which the pain is felt; and that the essential condition of the tissue of that nerve-root is atrophy, which is usually non-inflammatory in origin" (p. 110). In his last paper in the *Practitioner* for January (p. 31), he defines migrainous pain as "atrophic molecular irritation in the trigeminal root;" and in his work (p. 163) he claims for his theory "that the whole argument shall be taken together, for it is a case of cumulative proof; every link must be weighed and tested before the remarkable strength of the chain can be felt." Let us test the first link in this strong chain by an examination of the prodromata. One which often presents itself is a glimmering commencing on one side or other of the field of vision, and, as I pointed out in my former paper, there is during this glimmering stage in many cases, a tingling in some portion of the body, as the face, or the side of the tongue, or the arm, etc., and the tingling is on the *same side* of the body as that on which the glimmering is first seen. When the head begins to ache, the pain is felt on the side or temple *opposite* to that on which the glimmering first appeared.

The "hackneyed" Tissot describes a very interesting case of this nature. "I was consulted by an officer in the Austrian service, aged 32, whose migraine was marked by characteristic nervous symptoms. 'From the age of nine years' (such are his own words) 'I suffered about every second month, sometimes more frequently, from migraine, though I have also been quite free from an attack for a year. It began in the eyes, and without previous warning. Everything suddenly appeared cloudy, more so, however, on one side than the other, like some one who has been steadily gazing at the sun. This lasted, perhaps, ten minutes, then an arm and a leg on the same side went to sleep. Sometimes one side would be affected, sometimes the other. There was a feeling of tingling or formication, which was also experienced in the mouth and tongue, and for the time being I had difficulty in speaking. These sensations continued from ten minutes to a quarter of an hour; then the pain in the head began, but in the temple only, where it continued very severe for seven or eight hours. After vomiting, I felt relief.'" (*Œuvres de M. Tissot*, 1790, tome 13, p. 112.)

Tissot omits to mention whether or not in this case the dimness of vision commenced on the opposite side to that in which the pain in the head was developed. In all the cases, however, which have come under my own observation, this is the fact. The pain in the head is always developed on the side opposite to that portion of the field of vision which is most obscured.

Only last Saturday (January 18th) a case came under my notice at Addenbrooke's Hospital which showed this in a very satisfactory manner. The patient had charge of a stationary steam-engine; and on the previous day, "while I was occupied," he said, "in cleaning my engine, a dimness came over my right eye, and everything to the right seemed indistinct. It was just the same as if I had been looking at the sun, except that the mistiness seemed all rolling about. If I closed my left eye I could see very little indeed; and though the mistiness and movement were visible when the left eye was open, I was then able to see things much better than when it was shut. After this had continued from ten minutes to a quarter of an hour, I felt a pain in the left temple and over the left eye, which soon became very sharp." He described further the character of the pain, nausea, etc., which usually accompany sick-headache.

If, then, we have disturbance in the field of vision, together with tingling along nerves distributed to the side of the body *opposite* to where the pain in the head is subsequently developed, how is it to be accounted for?

According to the view which I have advanced, we have at this stage excitement of the sympathetic, and contraction of the blood-vessels of the side opposite to where the tingling is felt; atrophic molecular irritation of the roots, or an anæmic condition of the vessels about them, seems so far to be a satisfactory explanation. But in the next stage, with paralysis of the sympathetic, the headache is developed, and the tingling of the nerves on one side of the body ceases, and is replaced by aching and painful impressions in the opposite side of the head. Now, according to Dr. Anstie, it is this stage—the headache or migrainous pain—which depends upon atrophic molecular irritation. If his theory be correct, and migraine be what is ordinarily called a neuralgia, we shall then be forced to believe what is, I think, unique, that in this form of *neuralgia* "atrophic molecular irritation" should first linger about one set of nerves, and then transfer its affections to the roots of corresponding nerves on the opposite side. How this may be explained, I leave Dr. Anstie to show. On the other hand, it is not difficult to understand that, if the vessels of the brain on the aching side are dilated

* The Rev. R. W. Eyton, in his *Antiquities of Shropshire* (the model of county history and topography), states, vol. x, p. 1, that Nigellus was a clerk and physician. He does not state that he was a priest in orders, and he appears to base his opinion of his being "a clerk" solely on the fact that the estates conferred on him in Shropshire had been previously in possession of Spirtes, an eminent Anglo-Saxon ecclesiastic, who was exiled by Edward the Confessor. He asserts that Nigellus was physician to Count Roger de Montgomery in 1086 A.D.