lost his speech and his sight became dim; he retained consciousness sufficiently to enable him to make signs to his fellow workmen to catch him; the unconsciousness became complete, and he was convulsed, the entire attack lasting about ten minutes. Other symptoms were frequent giddiness, causing him occasionally to fall, starting in his sleep; at times, perspirations, or a feeling of stiffness in the tongue.

Iodide of potassium was given, at first, in doses of six grains, gradually raised to twenty grains. He only had one complete seizure, and the giddiness became less and less frequent and severe.

CASE VIII. *Syphilitic Eruption; Epileptiform Attack.*—Rose R., aged 24, had been in the Lock Hospital three years before for syphilis. For four months, she had been subject to an eruption on the scalp, and, when this was absent, she suffered from pain in the head and fits of epileptiform character, with loss of consciousness and struggles. These last came on very irregularly, sometimes three or four in a day; at others, two or three in the course of a week; and, at another time, they might be absent for a week. She had a papular eruption along the roots of the hair, and crusts on the back of the head. The eruption soon disappeared, and the fits ceased, under the administration of five-grain doses of the iodide of potassium.

Looking over my notes of old cases of epilepsy, I find several which, in the light of subsequent experience, I am now inclined to set down as of syphilitic origin, notwithstanding the absence of ascertainable syphilitic antecedents.

I may now sum up the features of epilepsy, symptomatic of syphilitic disease of the brain, by which it may be distinguished from ordinary epilepsy. As to the convulsive attacks themselves, there is nothing distinctive either in their character or frequency, or in the time of their access, *i.e.*, whether nocturnal or diurnal. It is difficult to obtain a reliable description of a convulsive seizure, and the opportunities of watching an attack are very rare; but, after careful questioning of witnesses in cases of idiopathic and syphilitic epilepsy, I have come to the conclusion given, which is, moreover, that generally accepted. If this statement can be qualified in any way, it would be by the greater irregularity of the intervals between the fits.

An important distinction, however, exists in the fact, that the intervals between the convulsive paroxysms, due to syphilitic disease of the brain, are not intervals of perfect health and freedom from nervous disorders. On the contrary, if there are not nocturnal headaches, or osteocopic pains, or sleeplessness, such as are caused by syphilis, independently of disease of the brain and diagnostic of syphilis, there may be frequent attacks of *petit mal*, often many times a day, or of convulsive twitchings of the eyes or of a limb, or merely of vertigo or of faintness; or there may be a state of extreme and unaccountable nervousness and apprehension.

Again, we are often put on the track of syphilis by the age at which the epileptiform attacks first come on. It is matter of universal experience that true epilepsy is a disease of early life. If the predisposition, hereditary or otherwise, exists, the disease develops itself before the changes attending the full evolution of the organs are completed. Dr. Russell Reynolds gives the following table of the age at which epilepsy began in 172 cases.

Under 10 years of age	...	...	...	...	...	19
Between 10 and 20	...	...	...	...	...	106
" 20 and 45	...	...	...	...	...	45
Over 45	...	...	...	...	...	2

But, of the 45 in which the disease began between 20 and 45 years of age, by far the larger number began at or about the age of 40; so that, in early adult life, there is almost complete immunity from epilepsy. Now, it is just at this period that the epileptiform seizures due to syphilis most frequently come on. When, therefore, a young adult begins to have convulsions of epileptiform character, we may at once suspect syphilis, and the suspicion will be strengthened if there are other nervous phenomena, and may be converted into certainty by evidences of past syphilis, nodes, perforations or cicatrices in the throat, white marks on the tongue, and pigmented scars at different parts.

Once let it be ascertained that epileptiform attacks, not accompanied by other evidences of cerebral disease than such as have been enumerated in the cases I have given, are due to syphilis, and the prognosis is most favourable. There is always a liability to relapse, but I have known almost complete immunity from all symptoms to be enjoyed for more than ten years.

[To be continued.]

ON THE MEDICAL SERVICES OF THE NAVY AND ARMY FROM THE ACCESSION OF HENRY VIII TO THE RESTORATION.

By WILLIAM R. E. SMART, M.D., C.B.,
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[Continued from p. 169 of last number.]

IN these quotations, we have most trustworthy evidence of the characters of many of those who obtained employment in the armies and navies of England and France, at the end of the sixteenth and beginning of the seventeenth centuries. As far as relates to the English navy, we learn that many of the surgeons were professors, rather than possessors, of the science and art of surgery; that the captains of ships had the power to enter and employ as such in their ships whomsoever they chose; that the system of bounty to surgeons on joining, to enable them to furnish their surgical chests, admitting of prepayments of from £20 to £50, equal to eight times as much in our day, was most grossly abused; that desertion, after receiving this bounty, was not an uncommon practice; and that ships often proceeded to sea without any one entitled surgeon to assist their crews. The only counterpoise to the force of these assertions made by Gale and Clowes, is that they wrote in the spirit of men who had closely at heart the position and interests of the London Company of Barber-Surgeons, of which they were eminent members, of whom Gale is candid enough to admit that the Company was unable to furnish a sufficiency of surgeons to meet the requirements of the great national services; and it must be inferred that the captains who engaged their surgeons were compelled to take the most plausible who offered themselves for employment; the state itself doing no more to assist them in their search, than by allotting to surgeons no better position and pay than to the common seamen. These, it must be admitted, were deplorable realities that militated against the best interests of the sick and wounded; but we ought not to pass from this era of military and naval surgery without taking a cursory glance at the state of the profession at that time. Henry VIII may be regarded as the far-seeing patron of the medical profession, as well as father of the English navy. On his ascending the throne, he found the profession practised by physicians, by master-surgeons, and barber-surgeons. Of these, the first had been closely allied with the ancient Church. With regard to that alliance, Dr. John Freind, who had served as physician in our army, 1717, in his *History of Physick* (fourth edition, volume ii, page 259) states that, "notwithstanding the edicts of the Church, either they grew into neglect, or the monks found a way to evade them; and it was chiefly owing to the multitudes of them employed in our faculty, that at length the Colleges of Salerno and Montpellier began to decay. There might be some reasons in these ages, why this sett of men should be made choice of, where their power over the consciences of others was very great, especially in cases which required secrecy; but the Reformation, I think, has put an end to this enormity; and perhaps it is no great prejudice to the publick, that in our times there are no more *Practicing Divines*, who either cannot be well qualified in their own profession, or must be very unskilful in ours." And (at page 111, vol. ii) he remarks that pharmacy and surgery were in so little esteem with the physicians (the *Medici Honorati et Nobiles*) "that they thought it below their character to understand them; and, therefore, they left all manual operations, such as bleeding, couching of cataracts, laying on caustics, etc., as well as the making up any medicines, to their servants, the *servilores* and *ministri*."

Notwithstanding this generally depressed state of surgery, there were to be seen in Padua and Paris, at the end of the fifteenth century, master-surgeons who boldly undertook to remove calculi from the kidney. The city of London had also master-surgeons of repute, even in the fourteenth century, although there, as elsewhere, the barbers were the ordinary attendants on surgical cases, receiving and boarding patients in their homes.

That great reformer, King Henry VIII, found our profession in a chaotic state: there were physicians and apothecaries, master-surgeons and barbers, and quacks of both sexes, all dealing irresponsibly with those ills that flesh is heir to. The physicians of the day included a mass of empirics and charlatans, together with travelled scholars and men of refined science. To these last the king granted collegiate rights, with power to grant licences to practise medicine and surgery, and to inspect all shops where drugs were stored and sold, which brought the apothecaries legally under their collegiate control, and gave them the power, if so inclined, to consolidate the science and art of surgery with the practice of medicine. The surgeons were "master-surgeons", whose social status rested on their individual ability and repute, and "barbers" who united the practice of minor surgery with a meaner calling, and

they alone possessed corporate rights. Henry VIII amalgamated these into one corporate body, styled "barber-surgeons". Apothecaries were members of the City Company of Spicers (now the Grocers), who then imported the drugs of the Levant. Henry placed them under control of the "physicians". These reforms were begun in 1512, by placing the practice of physic and surgery under ecclesiastical surveillance; and they existed in 1540, when the barber-surgeons were incorporated, and were authorised to pursue the study of anatomy in opposition to the sentiments of churchmen. Almost step by step these changes were resolved on during the pressure of foreign wars, which demanded the services of surgeons for the king's armies and fleets.

The barbers followed armies in the exercise of their calling as shavers, hair-cutters, and practitioners of surgery; and from among the barbers of London, King Henry the Fifth's surgical staff at Agincourt was selected by Thomas Morestede, who was sergeant-surgeon to Henries IV, V, and VI. The utility of his staff on that occasion, would naturally assist in obtaining their charter from Edward IV. King Henry VIII commenced the reform of our profession before that of the Church. In the third year of his reign, A.D. 1512, he gave to the Church the control of our profession, both medical and surgical, by ordaining that all practitioners, except those having degrees of medicine from Oxford or Cambridge, should be examined by the clergy, assisted by medical graduates or surgical experts in each branch respectively; the Bishop of London and Dean of St. Paul's being the assessors for London and within seven miles thereof; and in the provinces, the bishops or their vicars-general. In the fifth year of his reign, A.D. 1513, it was enacted that all barber-surgeons should be exempted, *as in time out of mind, from bearing arms*, "with privileges like heralds", as well in battles and feldes of warre, because they be persones that never used feates of warre, nor ought to use, but only their besynes and exercise of their science to the helpe and comforth of the King's liege people in the tyme of their nede;" also exempting them from serving on inquests, juries, and watch in cities.

It is pertinent to our subject to remark, that these important privileges were confirmed to surgeons of all degrees, under the pressure of war—England being then at war with France and Scotland—Tournay being captured, and Flodden fought in that year, but their first privileges related to those who served in the field; while physicians, who were less in demand there, did not secure the same municipal exemptions until 1540, when, it must be noted, that by the same Act the College of Physicians was recognised to be competent to give licenses in surgery as well as in medicine, thus extending the field from which surgeons might be drawn for the king's service. These facts illustrate how much the profession at large gained, during its early organisation, from the warlike services of a portion of it.

In the tenth year of his reign, A.D. 1518, he gave to the Royal College of Physicians its first charter, being incited thereto by the example of the Italian states, and other nations, and by several physicians, among whom were Drs. Chambre and Linacre, and by Cardinal Wolsey. By this charter, the higher grade of our profession was entrusted with self-government in the power of electing its own president and examining officers, with powers to punish offenders by fine and imprisonment, etc., in and within seven miles of the City of London. This charter was renewed, and was confirmed by Act of Parliament in 1523, with the extension of its licensing powers throughout England. Verily, this must be regarded as the Act of Emancipation of the profession of medicine from that Church which had leagued it with astrology and the occult sciences, and had degraded surgery to the status of a handicraft exercised by barbers as such; and in furtherance of that elevation of the profession, by another Act of Parliament, 1530, 22 Henry VIII, surgeons are defined as "not being handicraftsmen." It seems significant of the inherent power of the profession that, as soon as its autonomy was recognised, these changes occurred; but it lay still within the pale of the Church of Rome, for it was not till 1534 that Henry's quarrel with the Pope became irreparable.

In 1538, the cultivation of anatomical knowledge, as the true and sure foundation of surgery and medicine, was recognised by an Act of Parliament, legalising dissection at the Hall of the Barbers.

In 1540, the thirty-second year of his reign, the king placed the capital on the stately edifice he had raised for the development of our profession, by uniting the two bodies which legally practised the science and art of surgery, under the single incorporation, by royal charter, of the Barber-Surgeons' Company of London, to the end that, by their association in the same hall, the science and art of surgery might be improved generally. In order that the study of anatomy might be encouraged, it was enacted that the Company "may take annually the corpses of four condemned felons put to death, to make incision, etc., for their further and better knowledge, etc., of surgery." It ensured, at the same time, the separation of pure surgery from the art of the barber, by enacting

that no barber shall practise surgery, except the letting of blood and drawing of teeth, and that no surgeon shall exercise shaving or other feats of barberie.

It confirmed also to this united company the authority which Henry V had originally conferred on Thomas Morestede, to impress surgeons for the king's service, both within and without the privileges of the City of London. Of the warders or examiners, two were to be experts in surgery and two experts in barberie: which continued until the fifth year of James I, who, in granting a new charter, ordained there should be ten examiners for the license, *all being surgeons*.

From that period, surgeons became virtually distinct from barbers, although incorporated in one company, and using one hall in common; but, by the bye-laws of the company, the masters, elected annually, were alternately a surgeon and a barber, who signed the licenses of the current year; which practice became an offence to the surgeons. The connection of these facts relating to the renaissance of our profession, shows that, from the days of Henry V, our monarchs kept steadily in view one point as essential to the interests of the state, viz., the encouragement of that branch from which surgeons were to be drawn for the service of the state. The surgical staff of the armies of Henry V and Edward IV was drawn from the barbers of London, and their services led to corporate rights and privileges. Henry VIII enlarged those immunities, when he was at war, on finding only *twelve men* constituting the "fellesskip of the crafte and mysteries, surgeons enfranchised". At a later period of his reign, he amalgamated those who practised surgery, in one body; and, from a desire to multiply surgeons, he assigned to licentiates of the Royal College of Physicians the right to practise surgery, and pronounced surgery to be no longer a mere handicraft. State necessities may be assumed to have been the urgent reason for this patronage of a hitherto inferior calling; and it may be safely asserted that these necessities contributed, in no mean degree, to arouse and direct the energies of statesmen to organise the profession, so that the state might benefit by its services in war; and thus the profession at large, and the surgical branch of it in particular, owe many of their immunities to that cause. That branch has risen in importance paramount with that of the physician, but not without a struggle, prolonged throughout the seventeenth and eighteenth centuries, to free itself from the position of inferiority into which long usage and church influence had thrown it. Throughout that struggle the surgeons obtained support from the independence of position of those of their number who served in the navy and merchant service, where they were compelled to undertake cures of internal diseases as frequently as of wounds, and were, in the former service, provided with the means of doing this, by the king's authority, at the expense of the exchequer.

[To be continued.]

REMARKS ON THE PRODUCTION OF SLEEP DURING SURGICAL OPERATIONS.

By JOSEPH T. CLOVER, F.R.C.S.

SINCE the introduction of anæsthetics, there has never been a period when the opinion of surgeons as to the best way of saving pain was more unsettled than it is at present; yet it is a matter in which every practitioner in the country has had some share of experience, and questions as to the relative safety of various anæsthetics are often put by patients with the greatest anxiety. Our time will not be misspent, if we can make a decided step towards the settlement of these questions.

It may be truly said, that there is danger in every kind of inhalation, if in time, or quantity, or some other circumstance, it have been administered in excess. And there are *conditions of safety*, if we only knew them, that would make all the anæsthetics perfectly free from danger. No one, who has had much experience with anæsthetics, can look back without remembering some case in which threatening symptoms have occurred. Of these symptoms, some have been found to be of slight importance, although very alarming to an uninformed bystander; and some, on the contrary, where, although the lookers-on can see nothing amiss, the administrator knows that the patient is in imminent danger if the anæsthetic be not removed. I shall endeavour to illustrate my meaning further on.

I have been unable to account for the strong opinions to be found in the correspondence of the weekly medical journals, in any other way than by supposing that the results of small doses or brief inhalations of one agent have been compared with the larger doses or more prolonged inhalation of another. When we consider that with every known anæsthetic it is an easy matter to destroy the life of animals by concentrating or prolonging the dose, it will appear that it must be a