

CHAPTER I

Ophthalmology in Roman Britain

THE dawn of ophthalmology in Britain dates from the Roman occupation. Prior to this time we have no records, and apart from charms and the belief in the evil eye, which are of immense antiquity, and have nothing to do with ophthalmology in the accepted meaning of the term, we can only assume that as Britain was inhabited, diseases of the eye must have existed from the earliest times; and we can imagine neolithic man sitting down to flake his flints and occasionally receiving a corneal abrasion, or a perforating injury. It may also be permissible to guess that, as our forbears coloured themselves with woad, they must have possessed some degree of colour vision. Whether the different tribes used a universal tint, or whether variation was allowed, we do not know, but I have always liked to think that the shade of colour of *e.g.* the Brigantes in the North may have been different from that of the Iceni in East Anglia, and from that of the Silures on the Welsh March. But, with the settling of Britain as a Roman colony, ophthalmology came into being. Diseases of the eye were common in the Roman Empire and a class of practitioners, which undertook their treatment, existed. Galen gathered up the ophthalmic knowledge of his time and speaks, in one of his books, of a "forest" of collyria. According to Sir James Simpson, Galen gives the formulae for about a couple of hundred of these collyria. Some of them achieved so great a reputation that in time they acquired specific names; these were sometimes derived from the name of the original compounder (like Guthrie's hell-fire lotion of the last century). More often the name was derived from some specific property (*chloron*, green; *cirrhon*, yellow; *aromaticum*, from the pleasant odour). The collyrium *Diasmyrnes* contained myrrh, the *Diarrhodon*, rose-water;

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some were named from their cheapness, others from their great value; finally a collyrium was frequently known under some high-sounding but unmeaning name, such as Olympus, Proteus, Phoenix, etc.

The main evidence we have of ophthalmology in this country in Roman times consists of the numerous examples of Roman oculists' stamps which have been unearthed during the last two centuries. Esperandieu's authoritative *Signacula Medicorum Oculariorum* (1904) gives details of more than two hundred specimens of Roman stamps, and in a paper which I contributed to the *British Journal of Ophthalmology* in March 1926 I was able to describe twenty which have been found in Britain; and since that date I have collected notes of three other examples.

These stamps for the main part agree in their general characteristics. They are usually small quadrilateral or oblong pieces of stone engraved on one or more of their borders. The inscriptions are in small capital Roman letters, cut retrograde and intagliate, and consequently reading on the stone itself from right to left, but making an impression when stamped on wax or other plastic material which reads from left to right. These inscriptions generally first contain (and this is repeated on each side) the name of the practitioner to whom the stamp belonged, then the name of some special medicament, and lastly the disease for which the medicine was prescribed. Occasionally the mode and frequency of using the preparation are added. Two of the stamps unearthed in Britain are peculiar in that they are circular and the inscription is cut on the face. These stamps were probably intended to impress the directions for use on the semi-solid ointment, much as a maker's name is stamped on a modern cake of soap.

Roman stamps have been found at Tranent, in East Lothian; at Gloucester (this stamp was at first falsely designated the Colchester stamp); at Bath; at Littleborough, Notts.; at Wroxeter, Salop; at Kenchester, Herefordshire; at Cirencester (2); in county Tipperary; at Leicester; at Sandy, Beds.; at Colchester; at Lydney, Gos.; at Harrold, Beds.; and at Lans-

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down, near Bath. One of the recent finds came from near Crediton and the other two from the City of London.

Ireland is usually said not to have been subject to Rome, but Roman antiquities have been found there and among them a stamp* which is now in the British Museum. It is engraved on one side, as follows:

M JUVEN TUTIANI
DIAMYSUS AD VET CIC.

This may be extended, *M. Juventii Tutiani Diamysus ad veteres cicatrices*, and translated “the Diamysus of M. Juventius Tutianus for old scars”. Simpson, from whose classical papers I have derived most of my knowledge on this subject and from whom I largely quote, states that the Diamysus derives its name from the fact that the principal ingredient was misy, a metallic vitriolic preparation, useful as a stimulant and escharotic: as late as the year 1662 it still occupied a place in the London Pharmacopœia. According to Adams, misy was a combination of sulphate of copper with sulphate of iron.

As an example of a stamp with greater variety of inscription I may give the Cirencester stamp No. 2, in the museum of the late Mrs Wilfred Cripps. It was dug up in the year 1900, in ground near the G.W.R. station. This is a square stamp, each side measuring $1\frac{3}{4}$ inches in length, the depth being $\frac{1}{4}$ inch. The inscriptions are as follows:

1. ATTICI COLLYR TURINUM
AD OMNES DOLORES EX OVO.
2. ATTICI LENE AD OMNES DOLO
RES POST IMPETUM LIPPITU.
3. ATTICI DIAGLAUCAEUM
AD OMNES DOLORES F.
4. ATTICI COLLYR MELI
NUM AD ASPRITRUDIN F.

* Perhaps the owner may have been summoned to Ireland from England to treat some great Irish lord and have left his stamp behind him or lost it on the way.

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Inscriptions No. 1 and No. 4 have fine parallel lines separating the two halves of lettering; between the lines on the second inscription is the representation of a swastica. I do not know what the letter "F" means in the third and fourth inscriptions. The word *turinum* in the first inscription means frankincense; it was to be used with white of egg in cases of pain. The second inscription may be rendered "the mild application of Atticus for all pain following lippitudo" (either conjunctivitis or blepharitis, or a mixture of the two).

I surmise that the word *diaglaucaeum* may mean the green dialebanum; while the last inscription may be rendered "the *collyrium melinum* of Atticus for granulations". Galen makes mention of the *collyrium melinum*. Opinions differ as to its origin; whether from *malum*, an apple; or from the island of Melos, whence the ancients obtained their alum; or from *melinum*, meaning yellow.

It will be seen that this stamp allows Atticus four different kinds of treatment, one of them to be used with white of egg, by which he can alleviate pain, inflammation and granulations.

Among the Roman stamps of Britain are the circular ones of Wroxeter and Leicester. I feel that doubt may be expressed as to the latter being really a Roman oculist's stamp, but it is included by Deneffe, in his pamphlet *Les Oculistes Gallo-Romains au IIIe Siècle* (1896); it may with equal justice be considered a tradesman's stamp. But no doubt exists as to the Wroxeter stamp, now in the Shrewsbury Museum. This was unearthed in 1808 by a ploughman when ploughing a field near the "old wall". Figured and described by Parkes, in the *Gentleman's Magazine* in 1810, it was also mentioned by Nightingale in his *Beauties of England and Wales*; while Hartshorne, in *Salopia Antiqua* (1841), wrongly described it as an amuleta seal. This description was corrected by Albert Way, by Wright in his *Celt, Roman and Saxon*, and Simpson finally gave the best rendering. The inscription is on the face and is as follows:

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IBCLM
 DIA LBA
 AD OM
 NE Δ UN
 O EX O.

Simpson has extended this into *J(ulii) B(assi) Clementis Dialebanum ad omnem* Διόθειν *uno ex ovo*; and has translated it “the Dialebanum (incense collyrium) of Julius Bassus Clemens for every disease of the eye, to be used mixed with white of egg”.

The stamp has the rude figure of a plant engraved at one side of the inscription and Hartshorne confused himself and others by reading this figure as a letter at the beginning of the third line. Simpson has pointed out that in Roman times the Greek word diathesis meant the disease itself and not, as nowadays, the tendency to the disease.

There can be no doubt that practitioners in Britain in Roman times were well equipped with formulae for ointments to be used in diseases of the eye. Whether their cirrhon (yellow) ointment was as popular then as the well-known golden ointment of the last two centuries I cannot say; but the few examples I have given show a variety of medicaments to be employed for a variety of disorders. In two instances, among those cited, impressions of oculists' stamps have been found on jars or pots, in one case of red Samian ware; one of which was discovered, appropriately enough, in the neighbourhood of Moorfields Eye Hospital.

We must be careful, however, not to draw unwarranted conclusions from the ingredients of these ointments as to the types of eye disease present at this remote period; and I do not think that because a Roman collyrium contained copper, we have any justification for the belief that trachoma was necessarily endemic in Britain. There may have been sporadic cases.

I am not aware of any evidence to show that ophthalmic operations were much practised in Roman Britain. I should surmise that any eye operations which may have been per-

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formed would probably deal with conditions affecting the eyelids, such as ingrowing lashes, rather than the globe itself. Pterygia, if present, may have been cut off and lacrymal fistulae scraped. It is possible that such a malposition of the lid as entropion may have been treated by the very early procedure of cutting away a fold of skin, thereby leading in some instances to gross shortening of the lid. Since the Carthaginians are said to have cut away the eyelids of the Roman general Regulus with great freedom of hand, it may be that a practitioner in this outpost of the Empire occasionally removed the lash-bearing border of the lid in cases of inveterate ingrowing lashes. Cataracts may have been couched.

CHAPTER II

Anglo-Saxon Ophthalmology

OPHTHALMIC LEECHDOMS

IN THE YEARS 1864, 1865, 1866 there were published, in the Rolls Series, three volumes by the Rev. Oswald Cockayne, entitled *Leechdoms, Wortcunning and Starcraft in Early England*. These give the main facts about ophthalmology in Anglo-Saxon times.

The question of continuity in England after the departure of the Romans and before the pacification of the Heptarchy is a much disputed point. Authorities, such as the late Professor Haverfield and Mr Collingwood, are in favour of there being no continuity between the Roman and Saxon epochs. On the other hand, Professor Zachrisson, of Upsala, working on place-name material, holds that “for philological reasons a conscious and artificial revival of Roman names is entirely out of the question”.

Mr Cockayne, in his preface, would seem to support the latter tenet. He held that the Saxons accepted Greek and Latin learning, and that the Gothic nations had a knowledge of the kinds and powers of worts, *i.e.* the practical part of botany: “their medicines must have consisted partly in the application of the qualities of these worts to healing purposes, for otherwise the study was of no real utility”. Charms played a large part. Marcellus, *c.* A.D. 380, recommends, “to avoid inflamed eyes, when you see a star fall or cross the heavens, count quickly, for you will be free from inflammation for as many years as you count numbers”. Chastity on the part of the patient and the leech, coupled with Greek word written on parchment and suspended round the neck, will work wonders. “As soon as a man gets pain in his eyes, tie in unwrought flax as many knots as there are letters in his name, pronouncing them as you go, and tie it round his neck.”

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“For white spot, as cataract, catch a fox alive; cut his tongue out; let him go; dry his tongue and tie it up in a red rag and hang it round the man’s neck. If anything to cause annoyance get into a man’s eye, with five fingers of the same side as the eye, run the eye over and fumble at it, saying three times, ‘tetunc resonco, bregan gresso’, and spit thrice. For the same, shut the vexed eye and say thrice, ‘in mon deromarcos axatison’, and spit thrice; this remedy is ‘mirificum’. For the same, shut the other eye, touch gently the vexed eye with the ring finger and thumb, and say thrice, ‘I buss the Gorgons mouth’. For hordeolum, which is a sore place in the eyelid, of the shape of a barleycorn, take nine grains of barley and with each poke the sore, with every one saying the magic words, ‘kuria kuria kassaria sourophbi’, then throw away the nine, and do the same with seven; throw away seven, and do the same with five, and so with three and one. For the same, take nine grains of barley and poke the sore, and at every poke say ‘pheuge pheuge krite se diokei’, ‘flee, flee, barley thee chaseth’. For the same, touch the sore with the medicinal or ring finger, and say thrice, ‘vigaria gasaria’.”

The first of these volumes consists of an Anglo-Saxon *Herbarium*, derived partly from Apuleius and partly from Dioscorides, together with the *Medicina de Quadripedibus* of Sextus Placitus, with some fly-leaf leechdoms and charms. The second volume consists of three leech books; the first two form a treatise on medicine with its proper colophon at the end, the third is of a more monkish character. The book probably belonged to the abbey of Glastonbury. In the colophon is the following, “Bald habet hunc librum Cild quem conscribere jussit”. Bald was the owner, Cild, the scribe. The former seems to have been an Anglo-Saxon general practitioner, and he had some knowledge of eye prescriptions.

In volume I, the herbs are arranged in a sort of index, with the conditions for which they are of use. With regard to ophthalmic complaints, these are usually sore eyes, sometimes dimness of

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sight, occasionally bleared eyes; swelling of the eye is mentioned often, erysipelas once, headache more frequently.

I propose to take the various herbs useful for eye conditions and abstract what is said about them in the body of the work.

BETONY. To be gathered in the month of August, without use of iron; when gathered, shake the mould, till none of it cleave thereon, and then dry it in the shade very thoroughly, and with its roots altogether reduce it to dust; then use, and taste of it when thou needest. For sore of eyes, take the roots of the same wort, seethe them in water to the third part (evaporating two-thirds of the water), and with the water bathe the eyes, and take leaves of the same wort and bruise them and lay them over the eyes upon the face. For dimness of sight take the same root, by weight one drachm, and give (the patient) to drink fasting, then it diminishes the part of the blood from which dimness cometh. For blear eyes, take of the same wort betony, and give (the patient) to swallow, it will do good and will clear the sharpness of the eyes.

MUGWORT (*Artemisia vulgaris*). It turneth away the evil eyes of evil men.

RAVENS LEEK (*Orchis*). For sore of eyes, that is, when that one be tearful, take juice of this same wort, and smear the eyes therewith; without delay it removes the sore.

KNOTGRASS (*Polygonum aviculare*). For sore of eyes, before sunrise, or shortly before it begin fully to set, go to the same wort proserpinaca, and scratch it round about with a golden ring, and say that thou wilt take it for leechdom of eyes, and after three days go again thereto before rising of sun, and take it, and hang it about the man's swere (neck); it will profit well.

MAYTHE (*Anthemis nobilis*). For sore of eyes, let a man take ere the upgoing of the sun. . . and when he taketh it, let him say that he will take it against white specks, and against sore of eyes; let him take next the ooze and smear the eyes therewith.

WOOD LETTUCE. For dimness of eyes, it is said that the earn (eagle) when he will upfly, in order that he may see the more brightly, will touch his eyes with the juice, and wet them, and he through that obtains the greatest brightness. Again for dimness of eyes, take juice of this same wort, mixed with old wine and with honey, and let this be collected without smoke. It is best that a man mingle together juice of this wort, and wine and honey, and lay them up in a

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glass ampulla; use when need be; from this you will observe a wondrous cure.

GARCLIVE (*Agrimony*). For sore of eyes, take this wort, which is named agrimony; pound it so green by itself; if then thou have it not green take it dry and dip it in warm water, so as thou may earliest use it; smear then therewith; hastily it driveth away the fault and the sore from the eyes.

FEVER FUGE, or the lesser Curmel. For sore of eyes, take this same wort's juice; smear the eyes therewith; it heals the thinness of the sight (weakness of vision). Mingle also honey thereto; it benefits similarly dim eyes, so that the brightness (of vision) is restored. If one then fall into this mischief, take a good handful of this same wort, seethe it in wine or in ale, so that of the wine there be an ambur or jug full; have it stand three days; take then every day when there may be occasion, a half sextarius, mix with honey; then let him drink this fasting.

POPPY. For sore of eyes, that is what we denominate blearedness, take the root of this wort, which the Greeks name *mekona*, and the Romans *papaver album*, and the Engle call white poppy, or the stalk, with the fruit, lay it to the eyes.

CELANDINE. For dimness of eyes and soreness and obstruction (*albugo*) take juice of this wort, beaten out of the roots, let that be well pounded with old wine and honey and pepper together, then smear the eyes inwardly. Also, we have found that some men have smeared their eyes with the milk of this same wort, and it was thereby better with them. Again for eyes getting dim, take ooze of this same wort, or the blossoms wrung out, and mixed with honey; mingle then gently hot ashes thereto, and seethe together in a brazen vessel; this is a special leechdom for dimness of eyes.

CHEADLE (*Mercurialis perennis*). For sore of eyes and swelling, take leaves of this same wort, pounded in old wine: lay that to the sore.

HOUNDS HEAD (*Antirrhinum orontium*). For sore of eyes and swelling, take roots of this wort, seethe them in water, and then bathe the eyes with the water; soon it relieves the sore.

RUE. For sore of eyes and swelling, take this same wort rue, well pounded lay it to the sore, also the root pounded, and smear therewith; it well amendeth the sore. For dimness of eyes, the leaves of this same wort, give them (to the patient) to eat fasting, and give (them him) to drink in wine.

RUE (*Ruta Montana*). For dimness of the eyes and for an evil cut,