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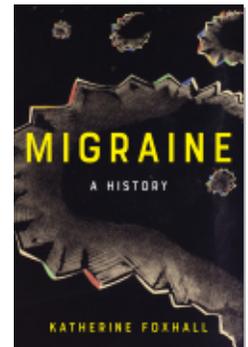
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The “Beating of Hammers”

Classical and Medieval Approaches to Hemicrania



Bald’s *Leechbook*, c. 950

A medical text from the tenth century contains six herbal remedies for the “healfes heafdes ece,” or half headache, as well as revealing the causes—known as “tokens”—of the disease:

For ache of half the head. Take the red nettle of one stalk, bruise it, mingle with vinegar and the white of an egg, put all together, anoint therewith. For a half heads ache, bruise in vinegar with oil the clusters of the laurus, smear the cheek with that. For the same, take juice of rue, wring on the nostril which is on the sore side. For a half heads ache, take dust of the clusters of laurel, and mustard, mingle them together, pour vinegar upon them, smear with that the sore side. Or mix with wine the clusters of laurel. Or rub fine in vinegar the seed of rue, put equal quantities of both, rub the back of the neck with that.¹

The “healfes heafdes ece” was the result of either “evil humour flowing” or “evil vapour,” or both. In order to counteract the dangerous effects of such internal bodily disturbances, the patient must first have blood let from a vein early on in the disease. This was to be followed by a wort drink, and then, the author promised, “the sore places shall be cured.”²

Bald’s *Leechbook*, the remarkable Anglo-Saxon collection of recipes, remedies, charms, and diagnostic and surgical guides in which these revealing instructions can be found, is the oldest near-complete medical text surviving in Old English, and the oldest remaining text in Europe that is not written in Latin or Greek (fig. 2.1).³ The *Leechbook* seems to be the collection of a knowledgeable medical practitioner. It is a textbook for practical use, perhaps either as a general reference manual or for training, at a time when medical practice

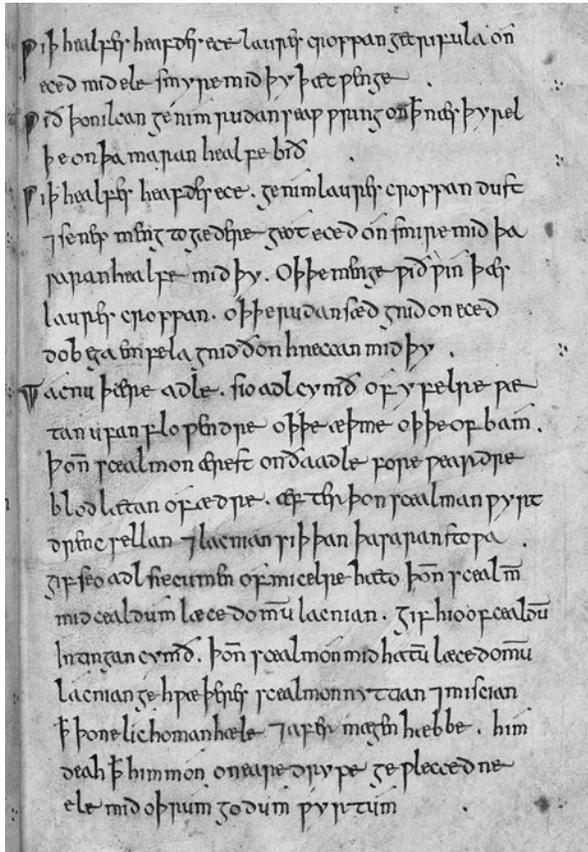


Fig. 2.1. "Remedies for Healfes Heafdes Ece [half headache]," from Bald's *Leechbook*, f. 8r, c. 950. © The British Library Board

brought together herbal remedies, minor surgery, urinary inspection, blood-letting, charms, amulets, and healing rituals in a mix of local traditions with the echoes of classical Mediterranean teaching.⁴ As historian Marilyn Deegan has explained, the *Leechbook* represents the "mainstream of the intellectual life" of its day. It provides important evidence of the theory and practice of medicine at the turn of the first millennium and is a compelling and valuable source with which to begin our journey through migraine's history.⁵

As this chapter shows, there is a great deal of evidence from the Middle Ages in which practitioners took seriously a painful disorder that affected approximately half the head. It had initially been named hemicrania in the second century CE by Galen, the most famous philosopher and physician in

the Roman Empire. From this basis, people developed a range of strategies and treatments for migraine, including herbal preparations and phlebotomy. Some of these individual remedies can be traced across centuries, showing how approaches that had first been developed in the classical period persisted through Arabic translation and practice and came back to Europe in the medieval period. Though interpretations of hemicrania's, or emigranea's, humoral causes differed over time and place, manuscript evidence shows that medieval writers widely accepted it as a powerful, painful illness, and this knowledge traveled far and wide.

Most important, texts from the classical and medieval periods answer an important question that I have frequently been asked as I have researched this long history of migraine: did people that far back *know what a migraine was*? The answer, quite emphatically, is yes, in their own terms. This chapter examines a wealth of evidence showing how migraine was identified and treated in the classical and medieval periods, but, most tellingly, it also reveals the sophisticated interpretations of humoral theory that explained its causes, symptoms, and effects on the body.

Bald's *Leechbook*

Life expectancy in Anglo-Saxon England at the time when Bald's *Leechbook* was compiled would not have been much more than thirty years, particularly for young men in societies frequently at war or under Viking attack, and for women, who often died in childbirth. Archaeological and textual evidence reveals that diseases such as fever, eye infections, tuberculosis, arthritis, and rickets were common. It is likely that women performed the majority of healing work in these mainly rural, agricultural societies, as women's burial sites have been found to contain small canisters for herbs that would have been attached to belts.⁶ For ordinary people, herbal remedies would have formed the basis of most medical treatments, while learned medicine was concentrated in religious establishments. Although we have little information about who Bald was or his intentions for the *Leechbook*, we do know that he was the manuscript's owner, and that he had instructed another person, Cild, to compile it, possibly at the priory scriptorium attached to the cathedral in Winchester, the most important city in the Kingdom of Wessex, in southern England.

The *Leechbook* followed standard classical practice by considering diseases affecting specific places from head to toe before moving on to diseases of the whole body, then those caused by worms or parasites, and, finally, paralysis,

fevers, and madness.⁷ Examining Bald's *Leechbook*, historian Michael Cameron imagines "an experienced physician at work . . . picking out what he had found to be useful in his practice and arranging it in a manner convenient for others to use, leaving out everything that he thought did not contribute to the subject of his chapter or which might confuse others less skilled than himself."⁸ One striking passage instructs the practitioner to treat his patients as individuals, considering their strength and condition, such as whether they were strong and vigorous, or delicate and frail. The practitioner must remember the "great difference" between the bodies of men, women, and children and the varying strengths of the daily laborer, the leisured, the old, and the young, as well as those used to hardship and those who were not.⁹

Thanks to the work of Marilyn Deegan, whose research reveals how the compiler selected, adapted, and rearranged items from a range of different classical sources, we can trace the origin of the remedies for the "healfes heafdes ece" back further. They came from the *Physica Plinii*, a compilation derived from several versions of the work of Roman naturalist, philosopher, and author Gaius Plinius Secundus—more commonly known as Pliny the Elder—dating from the fifth century.¹⁰ Pliny, described elsewhere in the *Leechbook* as the "great physician," was one of its most significant sources.¹¹ The *Leechbook* identifies evil humors and vapors within the body as the cause of half headache. The idea of humors originated in the Hippocratic corpus, the first substantial body of Western medical texts from the Greek city-states, dating from the late fifth and early fourth centuries BCE. Hippocratic physicians contended that the four humors were central to the body's condition, explaining a person's physical and emotional character, their health, and their behavior. Humoral theory conceived of the body as an envelope containing and nourished by four essential fluids that could move, or flow, around the body: phlegm, yellow bile (choler), black bile (melancholy), and blood. Galen synthesized the Hippocratic writings, developing a comprehensive explanatory system emphasizing the constitution, temperament, and responsibility of the individual in governing health and wellness. Galen explicitly attributed the cause of hemicrania as the ascent of vapors that were either excessive in amount, too hot, or too cold.¹² In particular, Galen attributed head pain to bilious humors arising in the stomach. This humoral theory of hemicrania, particularly its association with bile and the notion of a sympathetic relationship between the stomach and the head, would persist in understandings of migraine well into the nineteenth century.

The humoral system was a holistic approach to health, in which a person's

body was intimately connected to the world around them and was a microcosm of the universe. The four humors equated with the four basic elements. Thus choler was hot and dry, as fire; phlegm was cold and wet, like water; black bile was cold and dry, corresponding to earth, and blood was hot and wet, associated with air. The humors were also connected to the four seasons. As the humoral balance changed during a person's life cycle, old people tended to be drier than children, while women were perceived as colder and moister than men. A person's internal humoral balance explained their temperament. For instance, melancholic people were said to have an excess of black bile, while too much blood could make a person prone to anger. A person's humoral balance could also make them susceptible to particular disorders, so correcting that imbalance through a practice such as phlebotomy aimed to restore health, either by evacuating humors or preventing problems from arising.¹³ Among the bodily organs, the brain was considered cold and moist.

The idea that substances derived from animal, vegetable, or mineral sources had certain qualities that could be used to either counteract or enhance a person's bodily makeup was integral to a system of knowledge that understood humors, bodies, and diseases in terms of heat and cold, moisture and dryness. In particular, plants were assigned one of four qualities (hot, cold, dry, and moist) on a scale of four degrees, with one being the mildest and four the most intense, even poisonous. The most famous classical authority on the subject was Greek physician Dioscorides's *Materia Medica*, from the first century CE, whose wisdom was later reproduced in popular herbals. Plants could have further sensory qualities—they could be sweet, bitter, sharp, or have a pleasant or unpleasant smell—which could help identify whether they were poisonous or safe.¹⁴ We will consider the importance of this system as a rationale for migraine remedies more fully in the following chapter, but it is worth realizing here how Bald's ingredients would have been understood in his time. All four of the herbal ingredients in the *Leechbook*—nettles, laurel, rue, and mustard—were thought of as hot and dry. Thus, even though the *Leechbook* explained that hot humors or vapors could be a cause of the ailment, this suggests that in practice, hemicrania was primarily considered to be the result of cold and moisture within the body. As we will see, this understanding persisted throughout the early modern period.

The quantities of the ingredients required for the *Leechbook*'s remedies for half headache were mostly left up to the practitioner to determine, but these were relatively simple preparations that could be mixed up quickly with no equipment required, besides a mortar and pestle, and easily committed to

memory. Plants such as laurel, rue, and nettles that were named in the *Leechbook* as being good for half headache would have been readily available in gardens or households, while vinegar, eggs, mustard, and wine were common, inexpensive staples.¹⁵ Having several remedies to choose from gave the practitioner flexibility in selecting an appropriate medicine, based on the idiosyncratic constitution of the person to whom they were prescribing a treatment or, perhaps, on the seasonal availability of items. For example, a recipe requiring evergreen laurel would be better suited to winter than one requiring flowering plants, such as nettle or rue.

Humoral Hemicrania

Bald's *Leechbook* is remarkable, but other sources give further rich insight into how widely, and for how long, coherent concepts of migraine have existed. If Galen can be credited with coining the term "hemicrania," he was not the first physician to talk of a pain occupying only one side of the skull. The famous Ebers papyrus is commonly given as the earliest written evidence of this ailment. Dating from circa 1550 BCE, the text mentions a "disease of one half of the head." But the treatment given is not conclusively aimed at a disorder that can be firmly identified as migraine. The instruction to anoint the head with the skull of catfish, fried in oil or fat for four days, was the same as was indicated for a thorn in the side, in order to draw the thorn out of the wound. The Ebers papyrus offers other remedies for removing pain from the head, including ingredients such as terebinth resin, cumin, and juniper berries.¹⁶

For many neurologists, a passage from the Hippocratic *Epidemics*, dating from the fifth century BCE, seems to be the first clear description of the symptoms of migraine with aura in the historical literature.¹⁷ It described a young man, Phoenix, with

flashes like lightning in his eye, usually the right. And when he had suffered that a short time a terrible pain developed towards his right temple, then in the whole head, and then into the part of the neck where the head is attached behind the vertebra behind, and there was stretching and hardness around the teeth. He kept trying to open them, straining . . . vomits, whenever they occurred, averted the pains I have described, and made them more gentle. Phlebotomy helped.¹⁸

Greek physician Aretaeus of Cappadocia, believed to have lived in the first century CE, first classified headaches into three types. "Cephalalgia" was an acute pain, while "cephalaea" was more chronic. Of most interest to us is the

category of “heterocrania.” This was a one-sided headache that brought about “horrible and terrifying things,” including glassy eyes, painful sinews, nausea, and misery (if not death). The patient would feel slow, be offended by odors, and be averse to light. Aretaeus identified the cause as “cooling, along with drying out.”¹⁹

At the same time as Arataeus and Galen were formulating ideas that would come to dominate an understanding of hemicrania in the West for nearly two thousand years, there is evidence of migraine treatments from China during this period. Gwei-Djen Lu and Joseph Needham suggest the Chinese were using acupuncture for treating migraine in the second century. A famous physician of the Han dynasty, Hua Tho, treated Emperor Tshao Tshao (Wei Thai Tsu) for his migraine headaches, mental disturbance, and dizziness. Dynastic history records that Hua Tho immediately cured the emperor by giving him acupuncture at “a point in the sole of the foot and the general was immediately cured.”²⁰ This practice was also followed at the Thang imperial court, including by royal physician Chin Ming-Hao, using the acupuncture point known as *pai-hui* to cure Emperor Thang Kao Tsung of “an eye affection with migraine and dizziness” in 683.²¹

In European medicine, one of the clearest early examples of the adoption of a humoral theory of migraine comes from a sixth-century text known as *The Wisdom of the Art of Medicine*, which gave brief summaries of ideas about the body, its illnesses, and treatments.²² It divided the body into four parts (head, stomach, belly, and bladder), discussed the humors and sinews, and gave instructions for seasonal bleeding and purging to maintain humoral balance and prevent unhealthy conditions. Unusually, the *Wisdom* assigned the four humors to particular parts of the body, which classical medical practitioners had not done.²³ Migraine was associated with red bile (choler), which predominated on the right-hand side of the body, under the liver. Faith Wallis’s translation of the *Wisdom* tells us: “These things are hot and sharp and cause bodies to be depleted in summer time, but plump and phlegmatic in the winter. Their fumes rise up to the human brain and cause heat in the head, earache, and migraine.” The fumes of black bile could ascend through the body to the brain, but these caused subtly different disorders, namely, headache and dizziness in the head. The *Wisdom* explained how humors changed over one’s life cycle. At fifteen years old, “the heat of the blood comes upon him and there surges up in him red bile; and now it behoves to let blood. Red bile will dominate in him until he is twenty-five.”²⁴

Humors were an extremely strong bodily force determining a person’s well-

being. The twelfth-century text *Causae et Curae*, created by the celebrated St. Rupertsberg abbess, Hildegard of Bingen (1098–1179), presented a compelling rationale for emigranea's one-sided nature. Rather than blaming yellow or red bile (choler) for the ailment, *Causae et Curae* identified emigranea as a disorder stemming from melancholy (black bile) and "all bad humours present in a person."²⁵ The text leaves us in no doubt as to the power of these humors. Emigranea seizes only half the brain at a time, because "its strength is such that if it seized the whole head, a person would not be able to endure it." *Causae et Curae* gave clear instructions for a remedy that was supposed to sedate the pain and enrich the brain. Aloe and myrrh should be reduced to a fine powder, mixed with wheat flour and poppy oil to make a dough, and then the whole head should be covered with the paste. The patient placed a cap on top and kept it on the head for three days and nights.²⁶

More examples of medieval treatments survive in other manuscripts. A recipe from eleventh-century Chartres gave instructions to stroke peony root frequently over the site of the pain, take a bath with sweet-smelling herbs boiled in vinegar, or use a cap made with well-boiled hot abrotano (artemisia).²⁷ In thirteenth-century Wales, patients were instructed to eat a baked or roasted hare's brain stuffed with rosemary flowers, followed by sleep, to treat the migran.²⁸ An influential thirteenth-century medical compendium, the *Antidotarium Nicolai*, from the famous medical school in Salerno indicated the compound known as theriac could be used for a multitude of diseases and chronic illnesses, including epilepsy, apoplexy, headache, migraine, bronchitis, spitting of blood, asthma, leprosy, smallpox, and chills. Theriac (from which we derive the modern word treacle) was one of the best-known medical preparations in medieval Europe. This was a complicated preparation, often containing up to eighty different ingredients, and was one of the most important Galenic medicines. Originally used as an antidote for poisons and snakebite, theriac became something of a universal cure-all. By the fourteenth century, it was commonly used against the Black Death.²⁹

These remedies and explanations span over a thousand years and cover a huge geographical area. Yet they all share one important characteristic: while medieval treatments for some medical conditions incorporated elements of magic or religion, this consistently appears not to have been the case for migraine.³⁰ Rather, the remedies proposed and the ideas about hemicrania's causes contained within early texts offered practical suggestions based on secular traditions of healing and bodily knowledge. In particular, natural ingredients with specific qualities or physical interventions (including phlebotomy)

were designed to remedy an illness that could be convincingly explained as the result of imbalanced or bad humors.

Old Knowledge for New Audiences

It is difficult to imagine a more precise evocation of the burning, throbbing, internal turmoil of a migraine attack than one we find in the thirteenth-century encyclopedia *De Proprietatibus Rerum* (“On the Properties of Things”), compiled by Franciscan monk Bartholomaeus Anglicus (Bartholomew the Englishman). Emigranea was a “most grievous” ache that, for the patient, felt like “there were beating hammers in his head.” One would be unable to tolerate noise, voices, or light. The head pain seemed to pierce and prick, burn and ring, its cause identified as “choleric smoke, with hot wind and windiness.”³¹

Classical sources for *On the Properties of Things* included the Bible, Augustinian theology, Aristotle, and Pliny.³² Bartholomaeus’s ideas about emigranea came—as he acknowledged—from Constantine the African’s succinct medical handbook *Viaticum*, dating from the late eleventh century, itself a translation from the Arabic of a tenth-century medical work by physician Ibn al-Jazzar. Constantine had composed *Viaticum* at the Benedictine monastery of Monte Cassino in southern Italy. This was one of the most important centers of new medical learning and translations in medieval Europe, and it sponsored Constantine’s rendering of more than thirty texts from Arabic into Latin.³³ *Viaticum* would come to be broadly disseminated throughout Europe within a larger compilation of medical texts known as *Articella*, which formed the basis of the medical curriculum at Salerno. It appears to have been widely used by monks and commented on in universities.³⁴

Bartholomaeus’s discussion of emigranea came in the seventh of the nineteen books that made up his encyclopedia.³⁵ It followed the customary *a capite ad calcem*, or head to toe, format of medical handbooks, beginning at the top of the body, with a discussion of general head pain. Bartholomaeus explained that headache (*cephalea*) had two types of causes: internal and external. External ones included a blow to the head, or they could be of climatic origin, such as from the effects of warm or cold air. If the headache came from within, it could be because of a defect in quality, such as the body being too hot or too cold, or from humoral imbalance. The kind of head pain a person felt helped to identify the causal factor. Citing Galen, Bartholomaeus explained that intermittent pains could come from sharp humors oppressing the stomach, while a continuous pain was the direct result of a problem with the humors. The likely cause could be narrowed down by paying attention to the

location of the pain. If it came from choleric fumes (yellow bile), "heat will be felt in the nostrils, dryness in the tongue; there will be wakefulness and thirst, the pain will be greater on the right side than on the left, because that is where the seat of choler is." Phlegm produced a "heavy" pain. The head could also be divided into four sections, helping to explain why some parts could hurt more than others. Blood dominated the forehead, while choler was on the right side, melancholy on the left, and phlegm at the back. So if melancholy (black bile) was the cause, then the pain would be felt more intensely on the left.³⁶

Having outlined these general rules in relation to the head, Bartholomaeus next turned more specifically to emigranea, providing an explanation that would aid a diagnosis and outlining a plan for treatment. Reassuring his readers that the affliction could be quickly taken care of, Bartholomaeus indicated a number of procedures that should be followed. First, the practitioner must withdraw blood according to the position of the pain within the head. So, for pain in the back of the head, the vein in the forehead must be opened. If the pain was at the front of the head, a nosebleed should be induced. Alternatively, Bartholomaeus recommended scarifying—making a series of shallow cuts, often using a mechanical instrument—in the shins, in order to draw the humors, fumes, and spirits away from the site of pain in the head and transfer it to the lower parts of the body. After bleeding, the patient should be purged, using "appropriate" medicines, and then lukewarm water should be poured over the head, hands, and feet to open the pores and let the fumes evaporate. Understanding the location of pain in relation to the humors guided the next step. The offending humor in emigranea was "hot and choleric," so it required the use of cold medications in order to restore balance. "We anoint the temples, nostrils, and pulsating veins with rose water, together with the milk of a woman who is nursing a male child, and we induce sleep," Bartholomaeus explained.³⁷ Should these treatments fail, Bartholomaeus was reluctant to take responsibility for anyone considering alternative, more drastic measures and referred his readers back to his sources. "If you wish to use stronger medications," he advised, "consult the *Viaticum* of Constantine."³⁸

On the Properties of Things, originally composed for the friars at Magdeburg, where Bartholomaeus taught theology, became perhaps the most popular of the medieval encyclopedias, and it was widely circulated throughout Europe as a comprehensive source of both theoretical and practical knowledge. It was translated from Latin into French, German, and Italian during the fourteenth century. John Trevisa, a Gloucestershire vicar, translator, and writer, rendered this encyclopedia into English in 1398, before London printer

and publisher Wynkyn de Worde produced the first printed version in English almost a century later. Thomas Berthelet printed a second edition in 1535, and Stephen Batman “corrected, enlarged, and amended” the text in 1582.³⁹ Although Bartholomaeus’s encyclopedia continued to be reprinted and disseminated into the early modern period, it seems that some of the classical ideas about migraine he repeated were becoming less influential. In particular, the notion that migraine could result from either hot or cold causes seems to have given way to a general acceptance that cold ones were the most usual culprit, for which hot and dry ingredients were the best remedy.

The emerging preference for warming treatments is reflected in a mid-fifteenth-century manuscript collection, written in English, of over a thousand remedies for treating diseases and injuries. The collection contains at least eight ways to relieve mygreyne, or mygrayn. This includes three kinds of plasters to be laid on the head, two simple mixtures to be chewed in the mouth, a thick medicine that could be stored in a bladder pouch, a powder to be eaten, and a thick egg-based mixture to be applied to the forehead. One recipe for a powder stands out as being a particular favorite of the manuscript’s compiler. Attributed to Galen, “the gode philosophir,” it was also used by “my Lord John, the Duke of Somerset, in the Lent-time when he went over the sea.” The compound should be eaten “first and last byside [other] receytis.” The recipe was not simple, but it would certainly have been aromatic and sweet, requiring ginger, nutmeg, cloves, spikenard, anise, elecampane, licorice, and sugar, all beaten together into a powder. Mixed into pottage or a drink, or taken straight from a spoon, the text promised that the patient would be better within four days.⁴⁰

Spikenard is the most significant of the ingredients in this preparation. Also known as muskroot, and often as Indian spikenard, or just nard, it is a member of the valerian family (to which we will return in chapter 4), native to the Himalayas. The plant, mentioned in the Bible, had been used medically by Pliny and Dioscorides, including for “cold” diseases and against headaches, and it was often a component of incense.⁴¹ In addition to spikenard itself, this fifteenth-century remedy contained a number of the aromatic ingredients that had been required for nard oil. This substance was described in the ninth-century dispensatory of Nestorian physician and pharmacologist Sābūr ibn Sahl, from southwestern Iran, which is one of the earliest pharmacopeia written in Arabic. Nard oil most likely would have had sedative properties and was indicated for the treatment of hemicrania, among other things. It was an expensive recipe, requiring over twenty herbal ingredients, including cyprus,

laurel, elecampane, citronella, myrtle leaves, wild caraway, forget-me-not, sweet marjoram, stalkless roses, fresh myrtle-water, myrrh, and grape ivy. These had to be prepared with different liquids, in three stages, over a period of several days. The third stage took Indian spikenard (the ingredient that gave nard oil its name); pounded it together with cloves, storax, and nutmeg; and added this mixture to fresh water, balm oil, and the strained oil from the previous two stages. Then the whole concoction was boiled until the water had disappeared, before being bottled, stored, and used as required. Two other recipes in the fifteenth-century manuscript also contained spikenard as a key ingredient, and both mixed the plant with vinegar, mustard, and honey. These concoctions would have been aromatic (if not distinctly pungent) and warming. One remedy produced a thick mixture to be held in the mouth for as long as it took to say two *Agnus Dei*, and before bed one should drink a draft in God's name.⁴²

These examples from the thirteenth and fifteenth centuries provide important evidence of how medical information, derived from a corpus of classical knowledge—in this case, in the form of recipes for treatments of a particular disease—had been reintroduced to Europe via Arabic texts and then spread through learned centers, such as universities and monasteries, and, later, in print. These ideas, however, were not reproduced uncritically. Recipes could be adapted, so if the original classical ingredients were not available, they could be replaced by herbs that grew more locally, a theme we will see again in the early modern period.

Lay Understandings

One of the issues that comes from having to rely on medieval manuscript texts is that these sources tend not to reveal a great deal—Bartholomaeus's wonderfully evocative account of beating hammers is an exception—about the extent to which this knowledge was passed on to or reflected understandings within the wider population. Nonetheless, two examples from the fifteenth century—a poem, and the banns of an itinerant leech—do provide glimpses of how migraine might have been understood more broadly.

"My head did ache last night," Scottish poet William Dunbar wrote, as he addressed his patron, King James IV of Scotland (1488–1513), the morning after a migraine, in a three-verse poem called "On His Heid-Ake":

so much that I cannot write today
So painfully the migraine does disable me

piercing my brow just like any arrow
that I can scarcely look at the light.⁴³

We might imagine Dunbar seeking refuge from the bustle of the court, hiding from the narrow rays of sun that pierced the dusty gloom of his lodgings. In the second and third verses, the poet captured a sense of the migraine aftermath: of being “dulled in dullness and distress” as the “postdrome” came with the arrival of the new morning. Although he was relieved of pain, when he sat down to write he could find no words. His head dulled, his body unrefreshed, his spirit sleeping, he found himself unable to rouse for mirth and minstrelsy, revelry and dancing.

Dunbar’s migraine poem is something quite different from his usual representations of the Scottish court and society.⁴⁴ It is a personal and reflective piece, a petition to the king to ask for forgiveness for the poet’s temporary failure to entertain. The poem is a rare and important historical document, because, rather than being the instructions for a treatment, as most other sources from the Middle Ages are, it so clearly evokes what Dunbar and his contemporaries understood a migraine attack and its aftermath to *feel* like. It is particularly significant that Dunbar talked of his “magryme” as being accompanied by sensory symptoms—an aversion to light, an inability to think—combined with a severe headache.

Another piece of evidence from the fifteenth century indicates how learned medicine might have become accessible to a wider audience. Peripatetic practitioners, known by the term “leech,” advertised their whereabouts, the services they offered, and their prices through documents called “banns,” which were designed to be read out loud in public. In one surviving English example, the leech offered his services to “any man or woman that is diseased in any divers sickness.” Charging a penny for urine analysis, and another penny for a written prescription, the leech promised (with the Grace of God) to cure wounds, bruises, aching or broken bones, cankers, worms, flux, deafness, and all manner of scabs and gouts, as well as “mygreyn.” This, the bann explained, was a malady that affected half a man’s head and lessened the sight in his eye.⁴⁵ It is noteworthy that the bann enumerated these symptoms to potential customers. While broken bones, deafness, bleeding, burns and scalds, sores, and boils were obvious enough to require little explanation, the leech also did not feel the need to describe the symptoms of gouts and cankers. He only elaborated on three of the diseases he promised to be able to cure. As well as explaining mygreyn, he stated that a “whistle in a man’s jaw” was a hole that was

always running, while "morphew" made a person faint and "greatly discoloured in his visage."⁴⁶ The extra information in the case of these three illnesses suggests either that people would not have had the knowledge to be able to diagnose themselves, or that the leech was aware of different definitions of (or words for) these diseases and was describing his own understanding of them. As in Dunbar's poem, the leech conceived of mygreyn as involving pain in one side of the head and affecting vision, setting it apart from other headaches. The leech's clarification on these points suggests that these medical banns had an educational as well as a promotional purpose. As he traveled around, an itinerant physician provided geographically dispersed communities with a common terminology for a particular set of symptoms.

Blood

Bald's *Leechbook* and Bartholomaeus's *On the Properties of Things* both recommended bleeding as a first resort for hemicrania. This is not surprising. With new translations of classical texts, bloodletting became common practice for dealing with both physical and mental illnesses within a context in which blood played a hugely significant cultural role in religion, law, and medicine. Blood was believed to reveal the truth; it held body and soul together, determined emotions, and transported the humors around the body. In the second century, Galen considered bloodletting appropriate for any disorder, if a physician knew when, where, and how much to bleed and made sure to take the patient's constitution into account. The practice of phlebotomy became a standard way to remove excess humor.⁴⁷ The thirteenth-century surgeon Lanfranc of Milan explained that there were three types of bloodletting: to preserve health, to protect one from sickness, and to remove illness. Lanfranc recommended bleeding for those who ate meat, drank good wine, and took little exercise. It could be used against strong pains in the head without fever, quinsy, pleurisy, pneumonia, or illnesses that came from an overabundance of blood. In such cases, phlebotomy could remove either an incipient or an established illness.⁴⁸ Bleeding would have been particularly appropriate for a localized pain disorder like migraine, which was understood so clearly, in humoral terms, as the product of excess or bad humor.

In the fifteenth-century "Guild-Book of the Barber-Surgeons of the City of York," a slim, white, longhaired, naked man stares out at us from the page (fig. 2.2). Twenty red lines emanate from points around the man's body: from the forehead, face, and neck, down the arms to the elbows and hands, and then to the penis and feet. Each line represents a bleeding point on a vein, showing

open the cephalic vein, lying high in the right arm above the elbow. For "evyll sight," bleed the two veins behind the ears.

Follow the line connected to the point between the thumb and first finger of the man's right hand. It leads to a circle in the bottom left-hand corner of the image, which contains directions for opening the vein between the fingers and thumbs in order to treat pain in the shoulders and "migram" in the head.⁴⁹ Beyond the specific identification of the correct vein, however, much knowledge is assumed on the part of the practitioner, including how to diagnose a migram, how much blood to take, or whether there were rules about bleeding at particular times or seasons. Tellingly, this bleeding point between the thumb and forefinger is also used now in some modern migraine treatments. Paula Kamen describes having a transcutaneous electrical nerve stimulation machine attached to a pressure point between the thumb and forefinger on her right hand, and this is also a recognized acupuncture point for headaches.⁵⁰ While it would be wrong to infer any direct continuity, the similarity is certainly striking.

During the fourteenth and fifteenth centuries, images of *homo venorum*, or vein man, such as this one in the York guild book, began to appear more widely.⁵¹ These diagrams gave physicians simple, practical instructions about when and where to undertake bloodletting and showed the points on the body from which blood could be drawn. The images themselves range from basic sketches of the male human form, marked with bleeding points, to detailed illuminated manuscripts naming individual veins, giving clear instructions, and specifying the disorders that could be treated by opening each vein. Historians have suggested that the diagrams and charts in documents such as these may have been used to train apprentices, or that the York volume contained the knowledge required of professional practitioners with a guild background.⁵²

Drawing vital blood from a body—any body—whether suffering from migraine, mania, leprosy, or quinsy, was not to be taken lightly. As Bettina Bildhauer observes, even normal or harmless bleeding, such as menstruation, was considered with suspicion and "circumscribed as a moment of crisis."⁵³ A range of evidence from across the period suggests some of the factors a person with migraine would have needed to take into account when deciding whether, and how, to bleed. We have already seen how careful Bartholomaeus was to outline the location of bleeding in the head, depending on where the pain was felt, or to note that a patient could be scarified in the shins to draw

the humors away from the site of the problem. Phlebotomy could be performed gently, using leeches, or, more commonly, by venesection with a lancet or scarificating tool. The patient should be comfortable. A ninth-century ground plan of a Benedictine monastery shows a bloodletting facility complete with beds, privy, and four chimneys, so the recipients of bloodletting could be kept warm before the procedure.⁵⁴ There were seasonal considerations, too, and springtime was widely accepted as the best time to bleed patients prophylactically.⁵⁵ Bald's *Leechbook* advised that the optimum moment for bloodletting was early on during Lent (specifically, April), which was when evil humors that had been "drunken in" during winter could be "gathered" and taken from the body.⁵⁶ Several centuries later, William Clowes, one of the best known of the late-sixteenth-century surgeons, advised that phlebotomy should be avoided in extremes of temperature; thus spring and autumn were the most convenient times. Clowes explained that blood should be let on the right-hand side in spring, and on the left during autumn and winter, which might well have had implications for relieving one-sided headaches. During summer, phlebotomy should be undertaken at eight o'clock in the morning; in winter, at noon. The patient should exercise before bloodletting, while the sick and old should be encouraged to fortify themselves beforehand by taking bread and "stipticke wine" to help with clotting.⁵⁷ Few authors gave instructions regarding the quantity of blood that should be taken from each point, though the famous French surgeon Ambroise Paré, whose work was widely translated into English, urged bloodletters to consider the strength of the patient and the "greatness" of the disease. He warned that blood should not be drawn from "ancient people" unless immediately necessary.⁵⁸

There were two theoretical approaches to bleeding, both based on the understanding that humors flowed around the body and could be brought back into balance by taking blood. "Revulsive" bleeding aimed to draw bad humors to a distant part of the body before they had a chance to settle (as in the York guild book), while "derivative" bleeding withdrew blood at, or close to, the affected part of the body, in order to draw bad humors out directly.⁵⁹ In the thirteenth century, Bartholomaeus's instructions regarding migraine incorporated both approaches by recommending bleeding either from the head or from the shins. Lanfranc of Milan preferred to let blood from the vein of the thumb for head ailments, because it weakened the patient less than taking it from the head. Perhaps more importantly, fewer serious mistakes could be made when bloodletting from the hand. Before bleeding a patient at the extremities, Lanfranc advised that their hands or feet should be put in hot water

for an hour, with the blood flow then constricted above the wrist or ankle.⁶⁰ By contrast, the *Regimen Sanitatis Salerni*—an aide-memoire in poetic form, possibly originating in the thirteenth century, and one of the most widely disseminated and translated medical texts into the early modern period—recommended opening either the veins in the temples at the side of the head or the cephalic vein (running from the shoulder down the arm) on the left-hand side for diseases of the head, including megrim.⁶¹ In the sixteenth century, Nicholas Gyer's *English Phlebotomy* recommended cutting the cephalic vein in the middle of the arm for any disease above the head or neck, including "passions of the heade," as such as hemicrania, mygrame, and mania. Gyer explained that it was safe to open this vein in the arm, because "there is no sinew or artery under it." Even if a cut missed the vein in the first attempt, "he may be bold to strike it again: for there is I say, no ieoperdy [danger] to cut any muskle."⁶² William Bullein's popular *Newe Booke Entitled the Gouvernement of Health* recommended opening the middle vein of the forehead against "megrim, forgetfulnes, and passions of the head," though only after purging the head.⁶³ Jacques Guillemeau's *Frenche Chirurgie* also specified the temporal vein, bleeding it on the side corresponding to the pain of the hemicrania, as Galen had recommended so many centuries before.⁶⁴ These examples reveal that, over time, the practice of bleeding from the head for migraine (the derivative technique) seems to have become more popular, a trend reflecting a more widespread rejection of the revulsion method since the Renaissance.

Although the fifteenth-century writer Jacques Despars largely dismissed astrological judgments as being "uncertain, unstable, ambiguous, and often deceptive," medieval phlebotomists paid much greater attention to astrological calendars than their classical forebears had done.⁶⁵ The phases of the moon, positions of the planets, and season of the year were all relevant to determining bleeding practices.⁶⁶ Around the turn of the seventeenth century, another striking image of a man, this time showing twenty-one bleeding points, began to appear in printed almanacs. These were common across Europe in the early modern period and, for much of the population, were perhaps the only secular literature they would come across. They contained information about the seasons, religious events, signs of the zodiac, and diet, reinforcing understandings that a strong connection existed between the weather, the environment, and a person's health.⁶⁷ Elisheva Carlebach has argued that these folk, or shepherds, calendars were probably not intended to be purchased by the herders themselves, but by "those who read to them, instructed them, or employed them" in order to correct their "superstitious" ways.⁶⁸

At least seven editions of the *Shepherds Kalendar*, published between 1595 and 1656, contained the same woodcut image. Each point on the vein man was labeled with a letter from A to U, beginning in the middle of the forehead and working down the left-hand side of the body, before returning to the right eye and then down the right arm. For sufferers of megrim, two veins in the head were of interest. The point marked A, the vein in the middle of the forehead, should be bled to relieve aches and pains of the head, as well as for fevers, lethargy, and megrim. Point C represented two veins in the temples “called the Arteries, for that they pant.” Opening these, it was noted, was a more drastic procedure, to be used when the patient suffered from gout or megrim or wished to take away a “great repletion and abundance of bloud that is in the brain” affecting the head and eyes. The vein man diagram in the *Shepherds Kalendar* emphasized the astrological as well as the humoral requirements of the procedure. Precise instructions about the timing of bloodletting according to astrological rules ran vertically down the margin of the page. “Natural” days for bloodletting were when the moon was neither new, nor full, nor in the quarter. In addition, the moon must be in a sign that was considered good for bleeding, unless that sign was the one dominating the part of the body where blood was to be let, in which case “it ought not for to be touched.” In general, days when the moon entered Aries, Libra, and Sagittarius “be right good” for bleeding, while Taurus, Gemini, Leo, and Capricorn “be evill for bleeding.” In the case of megrim, bleeding should be avoided when the moon was in Aries, since this sign governed the head and face.⁶⁹ Writers had long noted the dangers of bloodletting in the head when the moon was in Aries. One fifteenth-century folded almanac instructed its reader not to make an incision in the head or face, or in the great vein of the head, when the moon was in Aries.⁷⁰ Another almanac went even further, warning that at the beginning of Aries, it is “full p[er]ilous” to let blood for headaches, and doing so was likely to cause “longe enduryng” of the disease, or even death.⁷¹

Conclusion

This chapter has revealed the range of humoral interpretations for hemicrania that existed between the classical and medieval periods. In particular, a consistent association of hemicrania with bile tells us something very important about the kinds of people expected to experience it. Yellow/red bile (choler) was associated with the fire of youth, while black bile (melancholy) was more likely to dominate during adulthood. Humoral theory, like present-day ones, seems to have presented migraine as a disorder that would often

have become apparent during childhood or the teenage years and would last through adulthood.

Almanacs provided a source of practical information for the lay population, allowing a knowledge of phlebotomy—and thus an important strategy for treating migraine—to spread beyond learned practitioners, such as those in the York guild or in monasteries. Even if a person would most often go to a barber surgeon for the procedure itself, an almanac could arm the patient with important information about when to seek out a phlebotomist and ensure that they were bled correctly. The popularity of phlebotomy suggests that, in the medieval period, a person with migraine might have become visible in a very particular, if subtle, way. If, for many people, bloodletting was a seasonal fixture in an annual routine of maintaining bodily balance, for a person with migraine, it might have been a much more regular occurrence that could be performed quickly, and relatively cheaply, when the need arose. It is worth considering the cumulative scarring effect that frequent, deliberate cuts—particularly when your practitioner favored letting blood from the temples—might have had on a person's body.⁷² Migraine, so often considered an invisible disease in our own time, may well have previously been quite visible through the marks that were left by frequent attempts to remove evil humors from the head.

As printers started to reproduce manuscript texts in greater numbers by the late fifteenth century, medical works gained a wide circulation throughout Europe. Within these, emigranea and megrim continued to find a prominent place, just as they had during the medieval period. But ideas about what migraine was, and how to deal with it, had changed over time. While early writers—including Galen, the unspecified author(s) of the *Wisdom of the Art of Medicine*, and Bartholomaeus Anglicus—attributed hemicrania to either hot or cold bodily causes, by the fifteenth century, the remedies that seem to have been absorbed most often into vernacular practice were the ones that used hot and dry ingredients to counteract a disease understood to have cold and moist causes. Though we have no way of knowing whether the experience of migraine in ancient Rome, or Anglo-Saxon England, or twelfth-century Rhineland was the same as ours, early explanations of the pain, discomfort, and sensory symptoms that characterized migraine appear, in many ways, to be remarkably familiar. Early medical approaches to hemicrania reveal a rich culture for dealing with a well-known and extremely painful disease.