

## IMPLICIT FEVER THEORY IN *EPIDEMICS* 5 AND 7

by

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THE SEVEN books of *Epidemics* (“Epidemiae”: visits to cities) which come to us in the Hippocratic Corpus fall into three groups, *Epid.* 1 and 3, *Epid.* 2, 4, and 6, and *Epid.* 5 and 7. Like the other works of the Corpus, their authorship, provenance, and dates are in doubt.<sup>1</sup> Traditionally since Galen’s time *Epid.* 1 and 3 have been admired as Hippocrates’ work or as the work of a “Coan” school connected with Hippocrates, while *Epid.* 2, 4, and 6 have been judged inferior, later productions of the same school, and *Epid.* 5 and 7 have been judged yet later and more inferior scientifically. The result has been general neglect of *Epid.* 5 and 7. My own recent work, looking towards an edition and translation of *Epid.* 5 and 7, has prompted a reconsideration of them, beginning with this modest paper. I shall lay out my premisses here in a fairly dogmatic way.

I have argued elsewhere<sup>2</sup> that the Hippocratic Corpus is made up of works assembled from numerous places at the Alexandrian Library in the third century B.C. and subsequently all attributed to Hippocrates. The first serious students of the Corpus, the Empiric physicians, selected out as “most useful” those works nearest to the Empiric techniques of observing and recording symptoms and syndromes without dogmatic assertions of hidden causes. Empirics admired all the *Epidemics* as Hippocratic, and “most useful”. They and others after them had a peculiar affection for *Epid.* 5 because it has a number of admissions of error by the physician-author. Because of these confessions they called Hippocrates “truth lover”.<sup>3</sup> Not until centuries after the first studies of their doctrines were the three groups of *Epidemics* distinguished from one another, initially on grounds of literary style, completeness, etc. Dioscurides and Capiton, the first literary editors of the Corpus, around 100 A.D., conjectured that only *Epid.* 1 and 3 were finished by Hippocrates for publication, and

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<sup>1</sup> The basic modern presentation, characterization of the “Coan school”, and dating of the various books of the *Epidemics* is K. Deichgräber, *Die Epidemien und das Corpus Hippocraticum*, (Abh. preuss. Akad. Wiss., phil.-hist. Klasse, No. 3). Berlin, 1933. F. Robert, ‘La prognose hippocratique dans les livres V et VII des “Épidémies”’, in J. Bingen *et al.* (editors), *Le monde grec. Hommages à Claire Préaux*, Brussels, Université Libre, 1978, pp. 257–270, offers an appreciation of *Epid.* 5 and 7 in which he accepts Deichgräber’s conclusions as modified by A. Papanicolaou, *Glossikai Ereunai epi tou Corpus Hippocraticum*, Athens, 1965. Similar views are expressed by H. Grensemann, ‘Die Krankheit der Tochter des Theodoros’, *Clio Med.*, 1969, 4: 73.

<sup>2</sup> See my *The Hippocratic tradition*, Ithaca, N.Y., and London, Cornell University Press, 1979, esp. pp. 204–246.

<sup>3</sup> See, e.g., Celsus, *De medicina* 8.4.3.

that the other *Epidemics*, published by some of Hippocrates' literary executors and descendants, consist of various combinations of genuine sayings of Hippocrates and spurious additions by those who published them. The editors, then, had to conjecture which was which. The conjectures were given greater currency by Galen's repetitions of them. They became the tradition, and subsequently people who took those conjectures for truth have, as I see it, adjusted their judgments of scientific merit accordingly, sometimes with considerable effort. People with the most different notions of science have been able to take *Epid.* 1 and 3 as scientific models, while considering that *Epid.* 5 and 7 fall away from that scientific high point. If they read *Epid.* 1 and 3 as dogmatic and theoretical in the manner of Galen, they find that *Epid.* 5 and 7 fall away in the direction of empiricism, but those who read *Epid.* 1 and 3 as models of Coan Empirical science find that *Epid.* 5 and 7 lean more towards dogmatism and the sins of Cnidus, and so on.<sup>4</sup>

I cannot here discuss such matters as relative scientific sophistication of the various texts, dating, authorship, etc., although what I have to say is indirectly relevant to reconsideration of those questions. The opposition between "dogmatic" and "empiric" is anachronistic when applied to these early texts. We must begin by analysing them individually to see how they formulated their own questions and went about answering them. I intend to do no more than that here with these somewhat neglected texts, asking first how the texts present themselves, what questions they pose in what way, and what theoretical postures, implicit and explicit, they assume. And then, specifically, I wish to assess the theory of fevers they assume – what the author or authors expected the audience to understand by semitertian, causus, etc., what were the courses of fevers, and so on.

*Epidemics 5 and 7* are two collections of case histories with a few aphorisms and *catastases* (descriptions of the year's weather). They share a considerable amount of material – the last part of *Epid.* 5, chapters 51–106, is, with the exception of a single chapter, also found in *Epid.* 7, interspersed through its 124 chapters. *Epid.* 5 often omits parts of case histories that appear in *Epid.* 7, but otherwise the two differ virtually only in minor differences in expression of similar things. The case histories could have come from one or many authors initially, and our present collections of them, *Epid.* 5 and 7, may have been adapted separately from an earlier collection (a commonly held view), *Epid.* 5 may have been derived from *Epid.* 7 in large part (the view of Ermerins, to which I incline), or the reverse (Deichgräber's view), or there may be other possibilities.<sup>5</sup> I shall here speak of the authors of *Epid.* 5 and 7 to mean the texts as we have them, and when I need another term I shall speak of the "narrator" as the person who recorded the observations initially. As for the question *whose* implicit theory I think I am pursuing, certainly the original recorder of the case notes

<sup>4</sup> Galen's views are most concisely expressed in *Abnormal breathing (De difficultate respirationis)* 7.855–891 Kühn. F.Z. Ermerins' views on Cnidian tendencies are in his edition of Hippocrates' works, 3 vols., Utrecht, 1859 *passim*. Robert (op. cit., note 1 above, p. 260) concludes that *Epid.* 5 and 7 show a decline from the triple approach of primitive Cos, the study of weather, of aphorisms, and of individual cases.

<sup>5</sup> For a review of the question of relations between *Epid.* 5 and 7, see V. Langholf, 'Die parallelen Texte in *Epidemien V und VII*', in *Corpus Hippocraticum*, (Colloque de Mons, September 1975), Mons, 1977, pp. 264–274.

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held the theory and made his observations accordingly, but so also, I must assume, did those who compiled *Epid. 5* and *7*, perhaps doing some editing in the process. I see no way to detect the differences among them in points of view.

What, then, of the way these ancient medical texts present themselves? Without introduction or conclusions, without reference to predecessors, without identification of author or audience, they plunge into description of events or, rarely, into the verities to be inferred from such events. The length of the accounts and the amount of detail vary widely, as does the quality of the language, which is sometimes extraordinarily colourful, sometimes desultory or banal. Some case histories change in their course from intense observation of circumstantial detail to the very casual (see, for example, 7.42 and 7.45, which will be discussed below).<sup>6</sup> A successful analysis will account for these peculiarities and variations by relating them to the author's pre-occupations. Apparent omissions or excesses in the narratives should, in the same way, be explicable by relation to the underlying intellectual structure. By these means I shall find the implicit theory and verify it when it is found.

*Epidemics 7.23, 24, and 25*, three unrelated cases, exemplify well similar patterns of observation, recording of precisely those things that are significant, and considerable care to note down the times of events – times that correspond with the critical days that occur elsewhere in the Hippocratic Corpus and in later medical writers. In 7.23, the words “acute fever” tell us the general nature of the disease, “after the winter solstice” puts it in the context of diseases of that time of year (V.392.15 L).<sup>7</sup> Pain in the hypochondria begins the author's differential diagnosis. The bowel movements indicate abnormality, their biliousness accords with fever and is probably thought to account for the intestinal pain. The “peripneumonic tongue”, I suspect, is yellow or yellowish white (cf. V.376.9 L), and its yellowness also hints at bile. Lack of cough, however, means that peripneumonia is not present, or not developed. Day 12 is the first day specifically mentioned. It seems likely that on that day the bowels were stimulated with a purgative. However, the movements were unhealthy, and do not lead us to expect good news on the critical day, Day 14. Day 14 brought some improvement, and the patient was fed, but on Day 16 the abnormal symptoms appeared again. On the 21st and following days there were chills, sweat, fever, and recovery, the first appearance of sweat in the disease, as the author points out. “Relapse” in the final sentence of the case history refers to apparent disappearance of symptoms on Day 14, followed by their return. Therefore, in all, the disease consisted of three periods of seven days with an imperfect crisis on Day 14 and a perfect one on Day 21. As we review the case again we might be surprised that no symptoms were recorded on the important days 4, 7, or 11, and we might withhold judgment as to whether the bowel movements of Day 12 are the result of purgatives. But one notes, in *Epid. 7.60* (V.426.7 L), one of the few aphorisms of Book 7, “purge on Day 5”, and in fact Day 12 is the fifth day of the second period (5.64, a version of the same aphorism, lacks the number, V.242.15 L).

<sup>6</sup> See the appendix for the translation of important cases referred to in the text.

<sup>7</sup> References to the Hippocratic Corpus are to volume, page, and line of Littré's text: *Oeuvres complètes d'Hippocrate*, ed. and trans. Emile Littré, 10 vols., Paris, Baillière, 1839–1861.

The following case, 7.24, records briefly an acute fever in the winter with an apparent departure of the disease on Day 6, but then a successful crisis on Day 7 (V.394.3 L). We can imagine that the author assumed that if the crisis on Day 7 had not occurred the situation would be dangerous. The patient was taking her life in her hands by acting cured on Day 6 and not waiting for the critical period to end.

7.25 offers a more complex narrative, leading to death on Day 7, told very circumstantially in its record of ambiguous signs, and with the narrative ranging back and forth in time in order to relate symptoms properly. The abatement of the fever on the second day suggests diagnosis of semiterian fever if the pattern repeats. The fact that her womb is named as the source of the trouble suggests that the haemorrhage mentioned at the beginning was incomplete (I take it to be menses, though it could be nosebleed). Day 4 produces bad signs, and in the theory of the critical days Day 4 predicts Day 7. On Day 4 there are terrible pains, the prostration which bodes so ill, and the increased fever and delirium. From these signs one would expect death or an extended period of illness. Day 5 brings relief and sweat. If sweat occurs, as here, all over the body, it is a good sign, but the other signs are ambiguous or bad (breathing, delirium, palpitation). The whiteness of tongue is common in fever, and whether the physician is inferring anything significant, I do not know. The description of the hypochondrium is ambiguous, and though the bowels had been favourable on Day 3, they are bad on Day 5. Why is the purge offered on Day 3? Probably because the fever had come down on Day 2, and as 7.60 and 5.64 say, purge when the disease is settled, which is to say at the first opportunity, I infer. The patient's increase in feverishness and development of delirium and thirst as the crisis approaches are not necessarily bad, but her eyes on Day 5 portend trouble and her corpselike appearance along with extreme mental and physical distress suggest that in the crisis the decision will go against her. We are not told with what therapy and nursing care the case was handled, though we assume that the narrator is the physician himself.

Thus, these three cases give us a sense of the pattern of *Epid.* 7, and also of 5. There is clear theoretical bias in the narrative, as in the choice of what to observe, but there is also no express valuation, for the most part, of the symptoms recorded. Virtually nothing is recorded which does not find parallels elsewhere in the Hippocratic Corpus. In the case of the "peripneumonic tongue", for example, we infer that the author means yellow, and assume that he thinks that if it turns black early it will indicate early recovery (cf. *Dis.* 3.15, VII.136 L). The leg flopping out of bed in 7.25 happens to be an explicit symptom in *Prognostic* Ch. 3, while snapping at one's child does not – but the prostration and irrational behaviour do go together to make a syndrome. It is possible that the author records something because it is unique and unintelligible, but I have not found demonstrable instances. Let us proceed to some of the more complex and problematic aspects of the medical practice described in *Epid.* 5 and 7.

7.39 offers a fatal case which appeared to be progressing normally towards a cure but which turned for the worse. It occurred at the beginning of autumn in a patient already weak from summer fevers and fatigued from a journey, as the narrator assesses it. The pain and spitting up of yellowish matter tell us that the disease is a bilious affection around the lungs (confirmed by excrement). Breathing difficulties and coldness of the extremities are bad signs, as is sticking the feet outside the covers. But

at the first period the signs were good, the disease appeared concocted (permitting purgation). The only disturbing sign reported as the disease approaches the climax of Day 14 is the tight hypochondrium. Yellowish matter on Day 13 as the crisis approaches could be simply a critical sign, but all the other signs turn bad on Days 14 and 15, the disease gets steadily worse, to death on a day the narrator did not feel it necessary to report. Instead, he gives a summary account of the urine: “ashy and raw at the beginning” probably describes flaky sediment, a bad sign; colourlessness is perhaps a better sign in the urine, but even in the good period before the fourteenth day the urine is not reported as having any signs of concoction, and hence it offers the same significance as the yellow expectorant. One can thus see the relevance of what is reported to the progress of the disease and expectation of its outcome from the author’s point of view. What is omitted, the day of death, is not predicted by what is given, as far as I can see.

7.40 is perplexing, but I am inclined to see it as an appendix to 7.39. The occasion for the appendix is comparison of the different characteristics (turbidity) of Cleochus’ urine in an otherwise apparently similar case. If one asks in 7.39 why the patient died, from the author’s point of view, one answer is that the material of the disease was not concocted adequately, and hence the disease was not passed out successfully. Pain near the spleen and leek-coloured material and foul smell from the bowels indicate gathering of the raw peccant material and festering. I do not think that *Epid. 7* offers grounds for further explanation why the patient did not recover.

7.93 offers an interesting example of theoretical bias in the narrative and lapse of informativeness at the end. It is a winter fever; phlegm possesses the patient, so does bile. The fever goes down at the beginning of the second period (seventh or ninth day). After that no more specific indications of time are given until the fortieth day, which would be the second significant day after Day 21. On the fortieth day the pus broke forth and was purged for 35 more days to complete health. What does it mean? I suspect that what we have here is a case of pleurisy conceived by the narrator in ways similar to that in *Diseases* 3.16. The patient was lucky to survive and to have the peccant material suppurate inside and be brought out successfully. What does “pus broke forth” mean (V.450.9 L)? That he began to cough it up, I imagine, and continued to do so. But if we compare this with *Diseases* 3.16 (VII.152–4 L), we see that there is a certain expectation that the pus will “break out” into the chest, whence it will probably have to be drained by incision and cautery. The laconic report of *Epid. 7.93* might well include all that. In any case, the author appears to make large assumptions about our knowledge of the expected course of the disease, and he does not name the disease.

5.31 is laden with theory, but rather short on definite information. Was Hekason’s lack of purging the fault of the attending physician or of himself? (We note that this case follows on two cases in which the physician failed to cauterize on time, but precedes cases of various results from purgatives.) Hekason had a disease in him which could exhibit itself as pain in the groin, as fever, or as diarrhoea and death. One can best call the disease bile, apparently. What the narrator does not tell us is the length of time comprehended by the three manifestations of the disease.

7.49–51 describe three examples of phthisis. In 7.49 the disease came from shaking

in childbirth, whatever that might refer to. It appears to be pleuritis followed by phthisis. When the fever finally went down after six months, it only heralded death in seven days. In 7.50, a related case, a steam bath brought on the disease. I think the author of 7.50 assumes his audience knows the facts of 7.49 and their meaning, so that 7.50 can be told with allusion to basic events and with concentration on peculiarities: Euxenes' wife had the pain later (V.418.13), and the vague references to time seem to mean that hers was a phthisis of about six months like that of Simus's wife, with death seven days after the end of the fever. The pains in her side developed, then, after about three months of phthisis with fever (but no thirst, V.418.10, and so not a very high fever). Why she was further harmed by a purgative drug and why is not clear to me – this could be a report of a unique fact unintelligible to the author. The author does not say when it occurred. In the third related case, 7.51, no cause for the onset of the disease is given; the early stages develop differently from the previous cases, and it is fatal after three months. There is considerable appetite (V.420.4 L) and a climax of fever with oedema of the lower limbs, with diarrhoea, at the end. So, the three phthises have in common the continuous low fever, the chest symptoms, the fact that the patients are women, and that the disease is fatal. The author appears to assume that we know what phthisis is, and so, for example, he may not have mentioned characteristic symptoms, such as the look of the shoulder blades. But when he tells us that Polemarchus' wife had a proper affection for food (V.20.4 L), he is addressing our expectation that the phthisic patient will not and that the patients in 7.49 and 50 did not have such a one.

7.41 offers some difficulty in interpretation. I would expect that the author conceives that the fever of Olympiades' wife was caused by her fall. The first sentence gives the time of year, winter, and the fact that she is eight months pregnant, but names her illness "acute fever". All the yellowness implied by *ochros*, used to describe her skin and eyes, is bile, apparently, and her tongue is dry and burnt from the fever. Her death appears to come very soon after the abortion. Why this is not called a premature birth is not clear to me. If we assume that the author is interested only in particular, peculiar aspects of the case and therefore tells it as he does, we must conclude, I think, that the fever caused by a fall is the prominent element, and the interesting one. I do not think that we are at liberty to imagine that the author is recording elements that he did not think were related, simply because of the tenor of the work which we have demonstrated above.

For other causes of disease, or things that set disease going, we would note that the epilepsy of 7.46 was set off by heat (which probably was considered as having warmed the phlegm and turned it loose); the masseur of 7.9 set off his disease with a purge (again, he turned the phlegm loose); and Cleochus in 7.47, who was overwhelmed by bile, (V.414.21 L) should have known better than to overdose on honey. In 5.33 (V.230.4 L) a woman apparently brought on a disease by cutting her throat, and she was treated with purges.

In sum, *Epidemics* 5 and 7 approach the cases they narrate as interesting momentary examples of a general pattern of disease: virtually any precipitating cause sets it off. Nursing care, followed by purgation and nourishment at the proper times, are the medical treatments. Observation for significant signs is careful, but when no

significant signs are expected, symptoms are not observed. The authors show no sign of looking to test or expand theory, but rather to apply it correctly. There are ways to make mistakes and kill patients, and there are ways to help them. But despite all the consciousness of possibilities of error by the physician, there is no consciousness shown of any doctrinal disputes – no disputes about classification or about modes of therapy.

In the light of all this, let us approach the fevers. Obvious in what I have adduced above is the regular association of fever with bile. The narrator assesses the colour of the bilious excrement, from yellow to leek green, to tell how bad things are. High fever is dangerous, cessation of fever usually indicates progress to recovery. But there are also fevers with names, diseases in which fever is the primary symptom, idiopathic rather than symptomatic fevers, one might say. How does the author view them?

7.43 presents a semitertian: acute fever on the odd days, remission of symptoms on even days, with treatment (purge) and food on the even days. But in the second period the disease becomes more continuous. The patient has parotitis on Day 9 or 10, but that disappears (when?). The narrative suggests to me that the physician simply gave instructions for maintaining the patient and then waited for signs, or reports of the progress of the disease, from the patient or his family. Sweat on the upper parts, Day 14, (V.410.16) is a bad sign, indicating protraction of the disease. The eruption on the thorax on the twenty-fifth day, which proceeded to the extremity, is probably good: it is a sign that the disease is working its way out, but there is medical intervention in an attempt to relieve the discomfort (bathing and vinegar rubs). The disease stuff finally settled in the kidneys and was excreted.

What, then, is a semitertian? A manifestation of peccant matter (we may say bile, V.410.6), bad on alternate days. But it can *become* another disease, as here a continuous fever, which is simply another manifestation of the same disease stuff, which must first be deposited somewhere and then passed off. Because the author virtually loses interest and sounds as though he gets only a vague report long after the end, we can infer that when the disease passed Day 20, or perhaps Day 14, he predicted its course and went off about his other business, perhaps elsewhere in Greece. 7.94, 95, 96 offer three semitertians with exceedingly desultory description by the author. What is he conveying? Perhaps that in women heartburn can be expected. One case occurred in the autumn, another in winter. The author ignores the classical phenomena of the semitertian, and assumes that the audience will know what they are.

The quartan fever, too, is treated in a particularly offhand manner, in 7.45. Mnesianax has already had eye trouble. His quartan is an added complication which does not change the conditions of his intestines. The fistular gathering (V.412.17) accords with his phlegmatic bowels. The sparks before his eyes and his mental affections (V.412.20–414.3) are not placed in time. The therapy – phlebotomy, hellebore, and walks – is directed at the affections of the head. Hence, if we hypothesize, as I think we should, that 7.45 is well and purposefully written, we will conclude again that the audience is aware of what a quartan is, what its course is, and how it would be related to the kinds of phlegmatic problems Mnesianax had. Quartans are the longest but least dangerous of acute fevers, as the Greeks thought of them (cf. *Epid.* 1, II.670–674 L). We might also compare what *Epid.* 6 has to say

about the quartan and epilepsy (V.324 L): “people who are affected by quartans are not affected by the great disease; and if they have caught it previously, they are cured when a quartan comes on”. This may be relevant to the manner of reporting and observation in 7.45: he seems to be looking for symptoms such as those of epilepsy as the Greeks observed it, but his opening statement says that the disease was first eye trouble, later quartan. It is also unclear where the seizure and fears of the case description fit unless he is addressing an implicit theory. In any case, I do not find in *Epid.* 5 and 7 any answer to “What is a quartan?”, but only the assumption that we already know.

However, the author of 7.112 seems to have unusual views about phrenitis, both its signs and the nature of the disease. “Shaggy urine (*ta dasea oura*) which is disordered (*anatetaragmena*<sup>8</sup>) is a precise sign (*akribes semeion*) of headache, convulsion, and death” (V.460.14–16). This is a unique statement in the Hippocratic Corpus so far as I can tell, although *Aphorisms* 4.70 looks related: “People in fevers whose urine is disordered like a mule’s have headaches or will get them.”<sup>9</sup> Phrenitis is an elusive disease concept for the ancients because its name can be associated either with the area of the hypochondrium (the *phren* or diaphragm) or with mental phenomena (the verb *phronein*, and hence “brain fever” was what it was later taken to mean). Wherever the locus of the disease is imagined to be, it is characterized by high fever, delirium, and convulsions. *Affections* (ch. 10, VI.216 L) and *Diseases* 3 (ch. 9, VII.128 L) associate it with the diaphragm, and with pain there. *Diseases* 1 (VI.201 L) describes it as a disease of the blood, caused by heating of the blood and corruption of the intelligence which the blood carries. But here it is associated closely with headache and with, I infer, intensifications of affections of the head. The phrenitis of the man from Halicarnassus was thought, apparently, to have resulted from compaction of the phlegm in the head. The high fever of the phrenitis began only after the misapplied phlebotomy, apparently. In *Epid.* 7.56 (V.422.17–19 L), in the list of possible types of complications in affections of the head, one looks to me like phrenitis as *Epid.* 7 seems to conceive it: peccant material in the head does not suppurate and drain, resulting in convulsions and death.

*Causus*, burning fever, is named as Chartades’ problem in *Epid.* 7.10. Vomiting of bile and bilious stools seem to give confirmation that bile causes it. Sleeplessness is a bad sign, peculiar to Chartades, as is the swelling of one side of his hypochondrium. The common symptoms of *causus* are simply ignored by the narrator, as are observations of the progress of Chartades’ disease other than bilious excrement. The author and the audience know what *causus* is, namely burning fever inside and coolness outside, burning of the tongue, etc. How, then, one might ask, would author and audience assess the haemorrhage through the bowels? It comes on the wrong day, but it is certainly Nature’s bloodletting, and it occurs together with sweat all over the body. Concurrent pain near the heart is, however, problematic, and, it turns out, the

<sup>8</sup> Perhaps “turbid” is a good translation for *anatetaragmena*. I do not know what is described by the word, nor do I know what mule’s urine is supposed to look like. “Disordered”, various forms of *tarassein*, is commonly used for mental disturbance, as for political disorders and for bowel problems.

<sup>9</sup> Littré (V.362) notes the resemblance. Ermerins deletes the inference about urine from *Epid.* 7.112, apparently on the grounds that it is wrong, and was the interpolation of a later amateur (*sciolus*) who thought that he understood the author’s meaning.

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haemorrhage is not part of a successful crisis. *Causus* in 7.114 (V.462.8 L) is caused by material that is, at that time, festering at the patient's spleen. In 7.42 *causus* precedes the parotid affections and the intestinal phenomena. We may infer, then, that *causus* is conceived as a particular version of fever, which may precede or follow the settlement of the material of the disease in a particular place.

In 7.1, a significant text for the theory of fevers, the author appears to be presenting a profile of an epidemic of fevers associated with a particular population in a specific year in late summer, and he appears to confirm that the fevers conformed to the classical numbers for the critical days (V.364.3–4 L). “The fevers were properly long” probably means “noticeably long”, *epieikôs* being frequently and casually used in that meaning in *Epid.* 5 and 7. “Failure to come to proper crises” (*dyskritoi*, but *akritoi* in the parallel case in *Epid.* 5, V.246.9 L), seems to me to mean that there is a failure to exhibit climatic phenomena just before recovery, and perhaps particularly failure of sweat to appear all over the body (cf. the successful crisis in 7.120, “On the seventh day she was slightly feverish but comfortable. She sweated all over. Urine of good colour. Total crisis.” (V.466.10–12 L.) The author does not say why he thinks these fevers are so irregular, but I would infer that he attributes their irregularity to that of the season. Polycrates and Pythodorus (V.364.5) are the only examples he gives of such fevers. Pythodorus, the second described (V.366.7), seemed to lose his fever on Day 11, apparently, since he was fed on the twelfth. Again, when the fourteenth day was past, he resumed eating and suffered relapse; again, apparently at Day 21 (though it is not precisely specified, V.366.15–17), he resumed eating and relapsed on the twenty fourth. At this point the author begins to count again, and thence the number of days cited is the number after the relapse, and he treats the case as a new one in which the figuring for medication and food starts from the time of the relapse. Pythodorus' fever is called “continuous” (*syneches*, V.366.7, 18 L), in order to contrast his version of the sudorific fever with that of Polycrates. The narrative of Polycrates' case is about half as long; his fever was very subtle for much of the time, as was that of Pythodorus in the first accession (V.365.7–9; 366.8 L). “Continuous”, then, of a fever, appears to describe those characteristics that Pythodorus exhibits and Polycrates does not, and it seems to mean “continuously intense”.<sup>10</sup> The author of 7.1 is indirectly arguing for a proposition that the fever never really remitted despite appearances. The same kind of question arises at *Epid.* 7.84, where the description reads “He got warmer. He did not seem feverish in other respects [or perhaps it means ‘to the others’]. The vessels at his temples leaped.<sup>11</sup> No pain anywhere. There was continuous thirst.” (V.442.8–10 L). The sudorific fevers of 7.1 are, in my judgment, the least attached to lesions or places in the body of any of the affections described in *Epid.* 5 and 7. That is, I take it, part of their irregularity which bothers the author.

<sup>10</sup> Similarly in *Epid.* 5.16 (V.216.7) the fever of Hippocampus, who has been kicked by a horse, becomes “less continuous” after seven days as he recovers. The only other use of the word, in 5.1 (V.204.1), is not revealing.

<sup>11</sup> Robert (op. cit., note 1 above, pp. 266–269) points out that *Epid.* 5 and 7 are unusual in devoting attention to observation of the temples to detect fever. One can add to the discussion in the text the other *catastasis* at 7.105 (V.456 L) which connects summer fevers with summer drought. In 7.105 the fevers have parotitis as a peculiarity.

The author seems to be keeping an eye on the disease and waiting for it to light somewhere, as for example in Pythodorus' chest (V.368.7 L), but it does not.

So, in summary one can say that in *Epid.* 5 and 7 the narratives assume that fever, of whatever kind, is the disease process working in the body. The physician gives nursing care, purges, and waits for its concoction and passing out, or else for its deposit somewhere. The thing that causes one rather than another kind of fever is the totality of the factors in the condition of the patient and the condition of the season. The main factor in fever is bile, whose source is described in 7.82. Choleric conditions come from food. They are more likely in summer when there is a normal increase in bile. The fevers of summer require most careful handling to keep their dangers minimal.<sup>12</sup> One must not overdose on the forbidden foods, and must watch the time of year; if there are signs of fever, let the critical days pass before acting normally again. Do not, if you are the physician, treat wrongly for fear of turning the fever into another worse disease. The authors of *Epid.* 5 and 7 refer comfortably and casually to names of fevers, assuming that the audience will know and apply the sorts of information that are in the therapeutic and aphoristic works of the Corpus. But even where there is apparent assertion of peculiar opinions about the nature of fevers there is no hint of intraprofessional disputes that are current and systematic.

#### APPENDIX: TRANSLATIONS FROM *EPID.* 5 AND 7

Littré, Vol. V, p. 228, 5.31. Hekason, in Omilos: from lack of purging and poor purging a sharp pain developed in his groin. It went away, but fever seized him. He was bedridden a long time. He drank nothing, nor was he thirsty, but was weak and trembling. His illness was cured, his body was in proper condition, and he benefited from the things administered. But at the end, the illness broke out below, and everything was passed, with much bile, and he lost consciousness and died. It appeared that he would survive the disease.

(V.364) 7.1. After the Dogstar there were fevers with sweats, nor did they cool down entirely after the sweats. They got hot again, were properly long, did not reach proper crises, did not produce much thirst. In a few cases they stopped in seven and nine days, in other cases in eleven and fourteen days and seventeen and twenty-two. For Polycrates, fever and the phenomena of the sweat were such as have been described. There was drastic purging below after a drug. The phenomena of the fever were so mild as to be imperceptible, except at the temples. And small sweats toward evening around the head, neck, chest, then again on to the whole body cavity, and again he became fevered. Around the twelfth and fourteenth days the fever increased. Few faeces. He took gruel after the purge. About the fifteenth, pains in the belly by the

<sup>12</sup> There is a question of punctuation and meaning where the change in the nature of fevers is described at V.438.7 L: if we punctuate after *puretoi*, as Littré does, it will mean "people who have shivering sometimes become ill-natured and are established in acute diseases." A stop after *epigenontai*, which I prefer, speaks of the *puretoi* of summer as susceptible to changes. Conceptually it does make some difference whether the fever is the subject of the change or the people are.

spleen and left abdomen. Applications of heat helped less than cold. His pain was relieved when he used a soft clyster.

(The same thing helped Cleocydes for a similar pain, and also in a fever.)

And about the sixteenth day the fever seemed more mild. There were bowel movements of pure bile, and his alertness increased. Breathing moderate; sometimes he would take a large breath and exhale again in great volume, like one in a faint or as if one who had walked in stifling heat should sit in the shade and catch his breath.

(V.366) Then on the seventeenth, in the evening, as he was getting up to sit on a chair, he fainted. He lay speechless for a long time, perceiving nothing. He took melicrat with difficulty, straining the cords in his neck as though his throat was dry and he was powerless. He came to himself with difficulty. After that the fevers became milder. The illness ceased on the twenty-second day. (cf. *Epid.* 5.73.)

(V.380) 7.9. The masseur at the house of Harpalides, having grown very weak in arms and legs towards autumn, drank at that time a drug that purged upward and downward. After the purge, fever. There flowed into the trachea such material as to stop his speech and cause him to choke while talking, like one whose throat is sore with quinsy. He choked when he was drinking, and had other symptoms of quinsy, but there was no swelling. The fever grew intense, and the cough, and there was bringing up of much watery phlegm. As time went on there was pain in the chest and left breast. When he would stand or move he had much breathing difficulty and sweat on the forehead and head. Symptoms in the pharynx persisted, but more gently as the pain moved down to the chest. From the outset he used warm honeyed beans. But when the fever came on he used instead warm oxymel and much honey as a linctus. When fourteen days had passed all symptoms ceased, and shortly later he regained his strength in arms and legs.

7.10. When Chartades had burning fever he vomited much bile and passed much bile in stools. He was sleepless. He had a round swelling by the spleen. On the ninth morning he rose up, having noise in his intestines without pain. But as he sat at stool there came forth more than a *choeus* (three quarts) of fresh blood, and after he waited a brief time a third of a *choeus* and blood clots. He had distress in the area of the heart and sweat over virtually the whole body. The fever seemed to cool. At first he was rational. But as the day went on the distress increased, there was delirium and slightly more (V.382) rapid breathing. He spoke more aggressively and greeted people more warmly than the occasion warranted; he appeared to have lapses of consciousness. When people offered broth and water from barley there was no improvement. Towards evening his breathing was very heavy and there was much tossing about. As he threw himself from the right side to the left and back he was not able to hold still for any time. His feet grew cold, rather there was heat at the temples and the head as the end was imminent. Bad sweats. When he drank, signs of noise in the chest and intestines as the drink went down. All the signs were bad. He said he wanted something under him, stared fixedly, resisted a brief time, and died.

(V.392) 7.23. Leophorbides, acute fever after the winter solstice, pain in hypochondria and in the intestines. Watery, large, bilious movements. Even in the daytime, comatose. Tongue peripneumonic. No cough. On the twelfth day small dark green bowel movements. On the fourteenth day the fever seemed to relent. Afterwards

he had gruel. On the sixteenth day his mouth was very salty and dry. In the evening shivering, fever. On the twenty-first in the middle of the day, chill and sweat. The fever relented but there was moderate heat. At night again sweat. And on the twenty-second day towards night, sweat. And the heat abated. (V.394) On all previous days he was without sweat, but the bowels were moist, even at what seemed in retrospect the relapse.

7.24. The woman who lived above, who belonged to Theocles, acute fever towards the setting of the Pleiades. Apparently abated, sixth day. She bathed as though she was cured. Early on the seventh day her cheek was suddenly red, I don't recall which. Towards the evening the fever came on, severely. And fainting, and she was voiceless. Not much later, sweat, and cessation on the seventh day.

7.25. The wife of Theodorus, greatly in fever, haemorrhage having occurred, winter. The fever abated the second day; shortly later she had heaviness of the right side, as from the womb. This was the first time it had happened. On succeeding days the pain in the chest was terrible. With fomentations on the right side it grew less. On the fourth day, the pains. The breathing quicker. The trachea whistled as she breathed with difficulty. She lay on her back; difficulty turning over. Towards night the fever more acute. There was, briefly, delirious talk. Early on the fifth day the fever seemed more mild. Sweat poured from the forehead, a slight one at first, then a long time over the whole body and feet. After this she thought the burning had grown less, and her body was cooler to the hand. The vessels at the temples jumped more, the breath was more frequent, she talked deliriously from time to time, and all signs changed for the worse. Throughout, the tongue was extremely white; there was no cough unless on the third and fifth day for a short time. There was no thirst, but expectoration. The right hypochondrium was much swollen on the fifth day but afterwards softer. Some solid excrement on the third day after a suppository. (V.396) On the fifth again, a little liquid. The belly soft. Urine astringent, like fig juice. The eyes as of one who is weary. She had difficulty seeing things and looking about. On the fifth day towards night, difficulty and delirious talk. On the sixth, again, at the same hour, that of the filling of the marketplace, much sweat possessed her. It went from the forehead to the whole body for a long time. She conducted herself rationally. Towards midday, however, she talked very deliriously, similar chilling and greater heaviness all over the body. Towards evening her lower leg slipped out of bed, she threatened her child irrationally and again fell silent, changed into quiescence. About the first sleep, much thirst, delirium. She sat up and rebuked those who were there. Again she fell silent and remained quiescent. She seemed to be in a coma the rest of the night. She did not close her eyes. Towards day she answered mostly with nods, her body unmoving, adequately alert. Again the sweat at the same hour. Similarly, the eyes downcast leaning more on the lower lid, staring, torpid, the whites of the eyes yellowish and corpse-like. Her whole colour yellowish and dark. Reaching with her hand towards the wall or the bedclothes. The gurgling occurred when she drank, and she spurted it out and brought it up through her nose. She twitched at the blankets, she covered her head. After the sweats her hands were like ice. Sweat persisted after the chill. Body cold to the touch. She jumped up, cried out, raved. Breathing very frequent. She developed trembling in the hands. At the point of death she twitched. She died on the seventh day. (V.398)

She urinated a little on the sixth day in the night. The urine was picked up on a twig, sticky, like semen. Sleepless all nights. After the sixth day bloody urine.

(V.406) 7.39. Deinon, at the rising of Arcturus, having previously been weakly disposed because of summer fever and diarrhoea, was fatigued from a journey and got a pain in his left thorax. And the cough which he had had earlier from a flux became at that time severe. He was sleepless, suffered from the fever from the beginning. And, sitting up on the third day he spat up yellowish matter. His trachea whistled and wheezed. About the fifth day, breathing properly frequent. Feet, calves, extremities especially were cold and outside the covers. Excrement was bilious from the beginning, not excessively little, not a lot. On the seventh, eighth, and ninth days he seemed better and slept some; material coughed up was more ripened. On the tenth day and up to the thirteenth it was quite white and clean. And his hypochondrium became softer, left side tight. He breathed more easily. A suppository produced a moderate movement. On the thirteenth day he again spat up yellowish matter, more on the fourteenth; and on the fifteenth leek-coloured matter. Bowels produced large, foul-smelling, bilious, damp movements. His left hypochondrium was elevated, and on the sixteenth day was very swollen. Now the breath was wheezing. (V.408) Sweat about forehead and neck, sometimes on to the chest. The extremities and forehead stayed properly cold. There was persistent leaping of the blood-vessels in the temples. Sleep was comatose night and day in the last period, the urine from the beginning raw, ashy. About the tenth to the thirteenth day it was thin and not colourless, but after the thirteenth as from the beginning.

7.40. Cleochus had pain in the thorax. The fever remitted. He sweated over the whole body. In the urine there were many particles suspended; later it was turbid (*ethorybêthê*).

7.41. After the setting of the Pleiades, an acute fever seized Olympiades' wife after a fall in her eighth month of pregnancy. Her tongue was burnt, dry, rough, pale yellowish. Her eyes yellowish and her skin corpselike. She aborted on the fifth day. The abortion was easy, and her sleep, as it appeared, was comatose. When they tried to rouse her in the evening she did not notice; after a sternutatory she could hear. She took a drink and some broth; she coughed while drinking. Her voice was not released, nor did she bring up anything. The eyes dim. Breath shallow, drawn through the nose. Colour bad. Sweat about the feet and legs as she was dying.

7.42. Nicolaus' wife, from causus, developed swellings by both ears, one shortly after the other, when it seemed that the fever was already stopping, I believe, on the fourteenth day. They were large. They remained without signs. She relapsed. Colour corpselike, tongue rough, very fuzzy, whitish; thirsty. (V. 410) Bowel movements numerous, wet, foul-smelling the whole time. Her body was wasted in its bulk before the end. She died about the twentieth day.

7.43. Before the rising of the Pleiades, Andreas had shivering, fever, vomiting. From the outset it looked like a semitertian. On the third day he again had a fit of shivering in the marketplace. Acute fever. Vomitus of pure bile. Delirious towards night. Easy again. On the fifth day, bad. On the sixth, a good bowel movement from linozostis. On the seventh day, worse. On the following days it became more continuous, and was without sweat from the beginning, and accompanied by much thirst.

Especially his mouth was parched and there was no drink he could take with pleasure because of the great discomfort of the mouth. The tongue was dry, inarticulate. A yellowish-white hardness bloomed on it. He was sleepless, nauseous, uncoordinated, helpless. The tongue, from dryness, sometimes lisped until he wetted it. He took barley broth for the most part. On the ninth or tenth day there were small swellings by the left ear and then beside the other one. They disappeared without a trace. Throughout, the urine was not a bad colour but without sediment. On the fourteenth day, sweat around the upper parts. The fever continued not much moderated; it went down on the seventeenth day. Bowel dry after the tenth day, passing nothing without a suppository. About the twenty-fifth day, an eruption appeared briefly, itching, hot, like burns. There was pain around the armpits and the thorax. It went down into the legs without signs, and ceased. Bathing helped, and ointment made with vinegar. In the second month, perhaps, or the third, the pain went to the kidneys, having appeared there some time before. He recovered.

(V.412) 7.45. Mnesianax had eye trouble towards autumn. Later, quartan fever. When he began his quartan, he was without appetite, but as it progressed he enjoyed food. (Polychares, in a quartan, had similar responses to meals.) It occurred with Mnesianax that before the fever and for a long time afterwards his bowel movements continued to be of much white, mucous matter, and sometimes there was a little blood without stretching and pain. And noise in the belly. After the fever there rose by his anus a hard swelling. It persisted unripened a long time, broke through into the gut, and came outward as a fistula. As he was walking about in the marketplace there were sparks before his eyes and he did not see the sunlight well. He withdrew some way, beside himself, and began to have spasms in the neck. When he was taken home he could hardly see and had difficulty coming to himself. At first he peered around at the bystanders and his body was cold, and was warmed only with difficulty, with bags of hot water and with steam beneath his bed. (V.414) When he had come to himself and stood up he did not want to go out, but said he was afraid. And if anyone spoke of severe illnesses he would withdraw in fright. Sometimes he said heat fell on his hypochondria and that the sparks before his eyes continued. Bowel movements large and frequent, and they were like those of winter. Phlebotomy; hellebore. Drinking cow's milk, but earlier, ass's helped, and stopped the bowel movements. Drinking of water from the beginning and walks along with purges of the head.

7.46. Anechetus' son had these symptoms: in winter, in the bath, he was heated by the fire as he was being rubbed with oil. Suddenly he had epileptic convulsions. When the convulsions stopped he gazed about, not with himself. And when he came to himself he was again seized on the next day in the morning. Convulsions, some foam. On the third day inarticulate. On the fourth day he gave a sign with his tongue, fell, was unable to speak, but hung up on the beginnings of words. On the fifth day tongue severely affected; the convulsion came on and he was beside himself. When these things ceased, the tongue with difficulty returned to its own condition. On the sixth day, as he abstained from everything, including gruel and drink, there were no further seizures.

7.47. Cleochus, after exercise and fatigue, and after having used honey for some days, had a swelling on the right knee, and more below it on the tendons under the

knee. He walked about lamed. His calf swelled up. (V.416) It was hard, clear down to the foot and the right ankle. On the gums by the teeth developed large grapelike swellings, livid, blackish, painless except when he was eating, as were the legs if he did not stand up. For the swelling had gone to the left side too, though less. There was a smoothness in the swelling about the knees and feet, like that of a black eye. Finally, he was unable to stand nor to put weight on his heels, but was confined to bed. Fever sometimes evident. No appetite, very little thirst. He did not sit up for the toilet, was nauseous; periodically, faintness. Hellebore, purging of the head. He applied manna to his mouth, in a mixture. For the ulcers on the mouth, lentil soup as a porridge was a help. About the sixtieth day, the swellings went down only because of the second hellebore. Pains came on his knees as he was lying down, and water and bile settled on the knees even many days before the hellebore.

(V.418) 7.49. The wife of Simus, shaken in childbirth, had pain in the chest and ribs. Cough, fever, bringing up of purulent matter. She went into phthisis and for six months had fever and constant diarrhoea. At the end, cessation of fever. The bowels stabilized after the cessation. After seven days she died. (cf.5.103.)

7.50. Also Euxenes' wife. It seemed to come after a steam bath. The fever did not depart for any period, but intensified more towards evening. Sweat occurred over the whole body. When the fever was going to intensify, her feet were cold, and sometimes the calves and knees. Dry cough for a short time as the fever was beginning to be acute, then it stopped and for a long time there was shivering of the whole body. No thirst throughout. She drank a purgative drug and whey and was further harmed. From the beginning she was without all pain and breathed easily. About the middle of the time, pain developed in her right thorax, the cough was set in motion, and asthma, and small expectorations, white, thinnish. And the shivering, no longer from the feet but from the neck and back. Bowels rather watery. The fever ceased with much sweat, and she grew chilled. The asthma was variegated. She died conscious on the seventh day after the withdrawal of fever.

7.51. Also Polemarchus' wife, in summer, started to be feverish. It left her on the tenth day. But afterwards she relapsed. Fever towards night. Again the fever left and then seized her and did not leave her for nearly three months. Much coughing. Bringing up of phlegm. When she came to about twenty days the breathing became continuously frequent. There were noises in her chest. (V.420) She was sweaty for the most part. The fever milder early in the day. Shivering sometimes seized her. She slept. Her bowels were watery sometimes and again stabilized. She had proper affection for food. But in the middle of the time she had pain in the knees and lower legs, and it was necessary for someone else to bend and extend them. The symptoms in the legs persisted to the end. And that was at hand. Her feet swelled up as far as the calves, and were painful to the touch. The sweats and the shivering abated, but the fever continually intensified. And before the end the bowel broke loose. She remained conscious. Three days before, she had wheezing in the pharynx, and again that stopped.

(V.422) 7.56. People who have dreadful pain in the head with fever: if they have it in half the head, and their nose exudes something watery, or thin, or concocted, or if it comes to the ears or into the pharynx from the head, there is less danger. But when the conditions are dry, and the lesions are frightful, there is much danger. And if nausea

be present, or bilious vomiting, or stupefaction of the eyes, or voicelessness and infrequent speech, or delirious talk; these signs are fatal and convulsive. Those who suffer from flux in half their head and develop fever while there is a watery discharge by the nose, likely lose the fever on the fifth or sixth day. (cf. 5.102.)

(V.426) 7.60. In diseases purge the intestines when the diseases are ripe (concocted) or in their fifth day; the lower intestines, when you see the diseases are settled. Indication: if the patients are not nauseous or heavy headed, and when the fever is mildest, and when it abates after the exacerbations. Purge the upper intestines during the exacerbations, because the intestines are then elevated when patients are nauseous and heavy in the upper parts. But here is the reason not to purge at the beginning: because chronic illness is automatically dangerous at that time. (cf. 5.64.)

(V.438) 7.82. Choleric conditions, from meat eating and especially undercooked pork, and from chickpeas and from fragrant old wine, exposure to sun, and cuttlefish, from crayfish and lobsters, garden vegetables, especially leeks and onions, and boiled lettuce, cabbages, and undercooked dock, and from pastry and honey cakes, and fruit and ripe cucumber, and wine and milk, vetches, and fresh barley. Choleric conditions are more likely in summer, as also remittent fevers and those attended by shivering. These sometimes become of ill habit and are established as acute diseases. Beware. Especially do the fifth day and the seventh and ninth give indication, but it is better to keep watch up to the fourteenth day. (cf. 5.71.)

(V.440) 7.84. After the meal he shivered in his sleep. He arose in the morning heavy headed. He shivered, vomited, head weighed down. Towards night it relented, to all appearances, until midday. He shivered again. During the night he was in a bad way, and on the subsequent day acute fever. Migraine headache, vomiting much bile, most of it leek-coloured. All symptoms relented. Sleep towards night. In the morning he was chilled. Sweat, dampness over much of his body. By the spleen he pointed out, for a brief time, a gathering, painless, which suddenly withered away. (V442) Towards night, sleepless. At the filling of the market-place the fever became acute. Nausea, vertigo, pain in the bowel, head pain, vomit of leek-coloured matter, smooth, sticky, like phlegm. Towards sunset all symptoms relented. Sweat of the head, neck. After the vomit he had a bowel movement, formed, watery, bilious, neither black nor proper looking. He was easier in the night and the subsequent day. Towards night again sleepless. The morning's vomit similar, and the day without discomfort. The head pains stopped after the sweat. Towards evening all symptoms relaxed. On the ninth day he did not vomit again. He was warmer. He did not seem feverish in other respects [or "to the others"]. The vessels at his temples leaped. No pain anywhere. There was continuous thirst. On the ninth day as he got up for the toilet he was very faint. He passed, with a suppository, black, bilious particles; the liquid, dung-coloured. His voice broken; heaviness in his movements; eyes hollow; skin of forehead tight. Otherwise breathing easily, composed. Mostly turned to the wall, lying loosely on the bed, bent, not moving. Tongue white, smooth. Around the tenth day and afterwards, globules in the urine, red with a little white at the centre. On the twelfth day he dribbled faeces-like gall and scrapings to a suppository; faintness. Then his mouth was dry. He kept rinsing it. Unless the water was very cold, he said it was hot; like ice, it cured his thirst. He kept throwing the covers off his chest. He did not want the chamber-pot

warmed. The fire was distant and small. Redness of both cheeks. After that, speech blurred. He had fever for one or two days, and it left him.

(V.448) 7.93. Meton, after the setting of the Pleiades, had fever and pain in the left side up to the collarbone, pain so severe that he could not keep still, and phlegm possessed him. There was much bilious excrement. (V.450) In three days the pain virtually disappeared, and the fever about the seventh or ninth. He had a cough, the material produced was not bilious, nor was there much of it, but phlegmatic. The coughing persisted. He nibbled at his food. Sometimes he went out, as though healthy. But sometimes light fevers seized him for a brief time. There were sweats towards night. His breathing more frequent in the fever. Cheeks red. Around the thorax a heaviness, and beneath the armpits and up to the shoulder. The cough persisted. A drug brought up bilious vomit. On the third day after the drug, the pus broke forth, the fortieth day after the beginning of the illness. Purging for thirty-five more days and he became healthy.

7.94. Theotimus' wife, in a semitertian, had nausea and vomiting; shivering at the time the fever began, and thirst. As it went on, even at its beginning, the fever was extraordinary. When she drank melicrat and vomited, her shivering and nausea stopped. And later the solution from pomegranate skin.

7.95. Diopithes' sister in a semitertian had terrible heartburn at the onset, and it continued all day. And head pain. So did other women about the time of the Pleiades' setting. Such symptoms were rarer for the men. (cf. 5.89.)

7.96. Apomotus' wife, in a semitertian, at Arcturus' rising, terrible heartburn at the onset, and vomiting and at the same time hysteric suffocation was obvious, and pains into the back around the spine. But when the pain was there the heartburn stopped.

(V.460) 7.112. Polyphantus, in Abdera, had pain in the head with severe fever. Urine thin, lots of it, deposits shaggy and disordered. The pain in his head did not stop. A sternutatory was applied on the tenth day. Afterwards he had a severe pain into the neck. He produced urine that was red, disordered, like a mule's. His mind was unsound in a phrenitic manner. He died with powerful convulsions. Similarly, the maidservant of Eualcides in Thasos, whose urine was shaggy for a long time and who had headaches. She became phrenitic and died with powerful convulsions. For, indeed, urine which is shaggy and disordered in a precise sign of headache and convulsion and death. And the man from Halicarnassus who lodged in Xanthippus' house had ear pain in the winter and headache to an extreme degree. He was about 50 years old. He had a vein cut by Mnesimachus. His head was harmed by the emptying, and chilling, since he was not purulent. He became phrenitic, died. His urine, too, was shaggy.

(V.462) 7.114. Anaxenor, in Abdera, had spleen problems and bad colour. And it occurred that, after a swelling had developed around his left thigh, this one suddenly disappeared. Not many days later, he developed about the spleen a sort of *epinyktis*, and a swelling and hard redness. After the fourth day a burning fever developed; it all became livid in a wide circle and rotten. He appeared better. He died. But he was purged beforehand and was aware.

(V.464) 7.120. Philistis, wife of Heraclides, began to have acute fever, redness of face from no clear cause. A little later she had shivering in the daytime. When she did not warm up, a spasm developed in her fingers and toes, and shortly after that she warmed

up. She produced urine that was full of congealed matter, cloudy, separated. She slept the night. On the second day she had shivering, heated up a little more. The redness was less. The spasms became more mild. Urine distinguished by the same signs. At night she slept, having lain awake briefly; there was no discomfort. On the third day she produced urine of better colour, small suspended particles. At the same hour she had chills. Acute fever. Sweat towards night on the whole body. Late in the day her skin colour changed toward the jaundiced type. (V.466) At night she slept straight through. On the fourth day blood from the left nostril flowed freely and slight menstrual flow appeared on time. Again at the same hour the fever became acute. Small amount of urine with congealed matter. Her bowels, by nature obdurate, became more compacted and nothing passed unless a suppository was applied. She slept at night. On the fifth day the fever was milder and towards evening she had sweat all over. And flow of menses. And she slept at night. On the sixth day she produced, in a flood, much urine with congealed matter, with a small sediment of uniform colour. About mid-day, she had slight shivering, she became warm, sweat all over. She slept the night. On the seventh day she was slightly feverish, but comfortable. She sweated all over. Urine of good colour. Total crisis.