Metals in Medicine: From Telephus to Galen

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A Pragmatic Approach to Pharmacology

The author of the Hippocratic Affections states: ‘It is worthwhile to learn from everyone about medicines that are drunk or applied to injuries; for people do not learn of these things by reasoning but by luck, and the skilled not more than laymen.’

In urging his audience to be receptive to useful remedies from layman and expert alike, this author promotes a practical attitude that was surely also operative throughout the long pre-history of medicine in Greece. The imprimatur of a Dioscorides or a Galen may have secured the place of some remedies in the Greek and Roman elite scholarly medical traditions—and have given some of them a longer life than they deserved—but we also see that those traditions were generally open to the drug lore of herbalists and midwives and even of laymen.

Theophrastus, whose Enquiry into Plants IX was highly influential on every still-extant pharmacological text from classical antiquity, with some allusions found even in Dioscorides, acknowledges his reliance upon herbalists and drug-sellers and preserves some of their knowledge. He names two herbalists, Thrasyas and Alexias, calling attention to their high levels of expertise. Thrasyas, he said, had developed a particularly efficacious drug mixture for a quick and painless death; in fact, he had made numerous deadly compounds and carefully observed the effects of poisons on different constitutions. Thrasyas had also discovered what we would term drug resistance, and had built up an immunity in himself to the effects of hellebore; in fact, Theophrastus mentions others who have similar knowledge, including shepherds and drug-sellers.

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1 Γὰρ φάρμακα, ὅσα ποτὰ καὶ ὅσα πρὸς τὰ τραύματα προσφέρεται, μανθάνειν δὲν παρὰ παντὸς- 
σο γάρ ἀπὸ γνώμης ταῦτα εὐρίσκουσιν οἱ ἄνθρωποι, ἀλλὰ μάλλον ἀπὸ τύχης, οὐδὲ τι οἱ χειροτέχναι 
μᾶλλον ἢ οἱ ἰδιῶται (45 Potter = VI.254L).
3 Theophrastus, HP 9.1 and 9.8–20.
4 Theophrastus, HP 9.16.8–9.17.2.
5 Theophrastus, HP 9.17.1–9.17.3.
Theophrastus speaks with obvious approval also of Thrasyas’s student Alexias who, he says, knows the entire medical art and not pharmacology alone.⁶ At another point, Theophrastus compares herbalists favourably with doctors on the grounds that they know how to compound the deadly drug aconite, which the doctors do not; the drug is useless, he says, to those who do not understand it.⁷ In a nod to popular lore, Theophrastus adds that aconite has no antidote apart from a mixture developed by country dwellers, though it is not infallible.⁸

Dioscorides and Galen work many traditional, and even magical, ingredients into their pharmacological writings, each author generally accounting for the therapeutic properties in terms of his own pharmacological system.⁹ Noteworthy, too, is Galen’s respectful interchange with an experienced midwife concerning the drugs used in treating the patient they have in common.¹⁰ As Von Staden notes, Galen intended to prescribe the very drugs the midwife had secretly been giving all along; they had turned out to be ineffective, however, and Galen relies upon the midwife’s testimony in deciding that a different course of treatment was required.¹¹

Theophrastus evokes lay knowledge when he discusses the customs of the Arcadians who, living as they do in a land rich in medicinal plants, drink cows’ milk in the spring rather than take medicines, in the belief that in spring the plants’ medicinal properties are strong enough to be imparted to the milk.¹² Perhaps Arcadian herdsmen had recognized the effects of a lactating mother’s food intake on her young, as Soranus was later to do.¹³ Soranus notes that the nurslings of sows who have eaten darnel and of goats who have eaten scammony will become dizzy or will be purged, though the mothers are not themselves affected, and he concludes from this that, in the tricky business of finding the right dosage for a sick baby, the wet-nurse should eat what the baby requires.¹⁴ Pliny also mentions the benefits of milk infused with the qualities of medicinal herbs,¹⁵ and he tells us that a certain Democrates cured a patient by giving her the milk of goats to whom he had fed lentisk.¹⁶

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6 Theophrastus, HP 9.16.8.
7 Theophrastus, HP 9.16.5–9.16.7.
8 Theophrastus, HP 9.16.5.
12 Theophrastus, HP 9.15.4.
13 These observations are essentially correct: drugs can pass easily from the bloodstream to the milk; see Reece 1991, 326.
14 Soranus, Gyn. 2.56.
15 Pliny, HN 24.28.
16 Pliny, HN 24.43.