#### Original article: History of Medicine

# On the hellebore trail an anthropological research into madness

Mario Augusto Maieron

Chief of Psychiatry emeritus ASL Varese (now Agenzia di Tutela della Salute - ATS - dell'Insubria)

**Abstract.** Beginning with myth, this article retraces the history of an antique psychiatric therapy, hellebore, present in medicine from Hippocratic times until well beyond the age of Enlightenment. Providing a background are aspects of the anthropological history of madness, relating to culture, not only medical, together with literary examples, which were reiterated from classic antiquity up to '900.

Key words: hellebore, madness

"You need a good dose of hellebore!" was, in ancient times the equivalent of our "You're absolutely crazy!" An example of this is seen in a brief dialogue between Menippus and Tantalus that Lucian, a Greek writer of the II century A.D. recounts in one of his *Dialogues of the Dead:* 

Menippus:

There is no meaning in that, o Tantalus, there is a draught

you need, though; some neat hellebore is what you want

Tantalus:

I would as life drink hellebore as anything, o Menippus, if

I could but drink (1).

This is what was written about hellebore in a History of Medicine a few years ago:

In ancient Greek and Roman times the term hellebore was designated as in fact still happens even today, to two different types of species, Veratrum and Helleborus. In ancient times one was defined as white hellebore (Veratrum album), the other as black hellebore (Helleborus niger) (Fig. 1). They were considered to be exceptionally efficient for eliminating harmful humors that infest-

ed the brain. They were therefore administered in the form of infusions, decoctions or the like to those suffering from melancholy, madness or epilepsy [...]

The white hellebore provoked vomiting while the black one provoked strong diuresis and violent bowel motions. Hellebore therapy had already been advocated in *Hppocratic Corpus* and recommendations may be found in all the pharmacological and therapeutic works of Galen, [...] Hellebore remained a principle medication until the XVII century when it all but disappeared from use (2).

Both are accurately described in a work by Dioscorides, a Greek doctor and botanist who practised medicine in Rome even earlier that Galen, during the period of Emperor Nero.

De materia medica, a 5 volume work, written in Greek, is considered to be the first Pharmacological treatise that considerably influenced the history of medical treatment in the centuries to come and was repeatedly translated into a number of languages until the end of 1500.

Pietro Andrea Mattioli, a doctor and humanist from Siena, translated it in the mid 1500's first into Italian (in two editions, the first in five volumes, the second in six, in 1544 and 1548 respectively) and then

into Latin (1554) (3), having as reference the Latin translation of the French doctor and botanist Jean Ruel that had come out a few years earlier.

In this work, besides an extensive botanical description of both species with illustrations, it also defines the different habitats (the *Veratrum Album* prefers damp, marshy places in the mountains, while the *Helleborus niger* likes dry soil and has a much wider habitat ranging from the sea to the mountains) and its therapeutic properties.

The black hellebore is said to purge the stomach and aids in cases of epilepsy, melancholy and madness. Matteoli declared that he himself had verified its efficacy and the absence of side effects.

But what about hellebore today?

Obviously, there is a botany card, a clear placement in the databases of poisonous plants, indications that are, however, extremely limited as far as pharmacology is concerned.

Above all, it should be underlined that in the past (as can also be seen in the drawings above) the two species of *Helleborus* and *Veratrum* were often confused while they do in fact belong to two different genera, the first to the ranunculaceae and the second to the liliaceae.

From a botanical point of view the *Helleborus niger* is a plant which goes under a variety of names: white hellebore, black hellebore, Christmas rose, winter rose, Hippocrates' root and is usually sold as an ornamental plant.

The name white hellebore is due to the colour of its flowers that can also be pink or red. The name black hellebore, that is also its scientific name, comes from the colour of its rhizome, Christmas and winter rose for the period when it comes into flower, the name Hippocrates' root for its history and therapeutic use in the past.

It is a perennial herbaceous plant, an evergreen, with a preference for hilly habitats, in woods or pinewoods, favouring limestone soils.

In the list of poisonous plants it states that all parts of the plant are toxic due to helleborine and its derivatives contained in them (these are cardio-toxic glukosides, similar to digitalis) and ingestion even of only the seeds can prove to be fatal.

The medicinal properties of the plant, moreover no longer utilized because of its high toxicity even for

doses close to therapeutic ones, concern purgative effects such as drastic, narcotic, emetic and cardiotonic drugs.

It is still used externally in the form of creams and as a counter-irritant for some skin diseases.

In the past and up until quite recently it was regularly quoted in manuals and prescriptions for therapies together with the 'Simples'. One example I found in a botanical dissertation of the early 700s (4), gives a description and prescriptions for its use (with dosages in various forms, expressed in drachm, scruples and grains, and the names of the prescribers) and here, too, the names of *Helleborus* and *Veratrum* are used synonymously.

The *Veratrum album*, belonging to the liliacee family and also known as false gentian was used in medicine in the past, for its analgesic, emetic and vesicatory properties (5).

Both the *Veratrum album* and *Helleborus* are still in use today for multiple purposes particularly in psychiatric and neurological diseases, in homeopathic medicine. However, due to the characteristics of this type of medicine, with its use of substances that are highly diluted and the theoretical assumptions having little in common with traditional medicine, especially with the Hippocrates-Galenic approach, they have a dif-



Figure 1. On the left *Veratrum album* – on the right *Helleborus Niger* by Pierandrea Mattioli – *Commentarii in libros sex Pedacii Dioscoridis Anazarbei De Materia Medica*, Venetiis, apud Valgrisium, 1554

ferent significance, which is totally incompatible and incomparable with what was previously indicated for the medicinal properties of these plants.

The stories of hellebore during the course of the centuries must obviously begin with myth and the myth is that of the young daughters of Proetus, King of Tiryns, their madness and Melampus who cured them.

The myth is found in Hesiod (VIII-VII B.C.) (6) and Bacchylides (VI-V B.C.), and more recently in Apollodorus or to be more precise in that which is known as Pseudo-Apollodorus (In *Biblioteca* from the II century A.D. falsely attributed to Apollodorus, an Athenian historian and grammarian of the II century B.C. in which there are numerous references to Melampus, Proetus and the Argos women's madness cured by him).

However this myth reoccurs in many other texts and is also mentioned by Ovid in Metamorphoses, speaking about Melampus as the son of Amythaon. ("Amythaon's son, when he had saved the demented daughters of Proetus from madness, by herbs and incantations ...) (7).

An indirect reference is also made by Theophrastus, the Greek philosopher and botanist of the IV century B.C. who even indicates hellebore by the name of melampodion, "from the name of someone who first found it and cut it" (8) and in Pliny that with the some nome indicates it in his monumental *Historia naturalis*:

The repute of Melampus, as being highly skilled in the arts of divination, is universally known. This personage has given a name to one species of hellebore, known as the "Melampodion." Some persons, however, attribute the discovery of this plant to a shepherd of that name, who remarked that his she-goats were violently purged after browsing upon it, and afterwards cured the daughters of Proetus of madness, by, giving them the milk of the goats (9).

This is the myth according to Bacchylides:

For while still virgins, they entered the sanctuary of the purple-belted goddess, and said that their father far surpassed in wealth the golden-haired consort of holy, widely powerful Zeus. In anger at them, she put a twisted thought into their minds, and they fled to the wooded mountain with terrible screams, leaving behind the city of Tiryns and its god-built streets.

[...]

For thirteen whole months his daughters roamed wildly through the shadowy forests and fled through sheep-nurturing Arcadia (10).

According to all sources, it concerns, a furious madness, that Apollodorus, perhaps the most moderate in terminology, described as "a total lack of decorum", "absolutely shameless".

The conclusion, however, is always successful but with varying solutions.

The healer is almost always Melampus, the diviner-healer, who sometimes uses hellebore, which goes under the name of melampodion, on other occasions it is symbolic and suggestive rituals, and sometimes both.

Occasionally however it is Artimedes who heals the Pretid after expiatory rites and sacrifices and in one particular case Asclepius.

Bacchyllides writes further:

And the huntress, whose father is the highest, god heard him praying.

She persuaded Hera, and stopped the godless mania of the bud-garlanded girls (11).

A short but complete biography of the Melampus is the subject of a recent publication by Francesca Marzari (12, 13).

Her conclusions begin like this:

At a distance of almost three millennia from his debut in Homeric poems, the legendary sooth-sayer Melampus continues to exercise an indisputable fascination, so much so that some medical historians see him as one of the founding fathers of psychiatry and pharmacotherapy [...]

Hellebore, already found in the pharmaceutical bag of Hippocrates, the father of medicine, can therefore be considered the very first of psychiatric drugs.

In fact it was with Hippocrates that medicine as a secular profession was first born, finally rejecting the previous management by priests and the temples.

And Hippocrates was the first, despite the limitations of that era, to define madness and a way of curing it from a scientific approach.

References appear in *Hippocratic Corpus* and particularly in the *On the Sacred Disease* and *Epistles*, in correspondence between Hippocrates and Democritus.

Madness, in Hippocrates, has an etiological explanation when concerned with his humoral theory and this is what is said:

The texts are the following: From *On the Sacred Disease*, Ch. 14:

Men ought to know that from nothing else but the brain come joys, delight, laughter and sports, and sorrows, grief, despondency, and lamentations. And by this in an especial manner we acquire wisdom and knowledge, and see and hear, and know what are foul and what are fair, what are bad and what are good, what are sweet and what unsavoury;

[...] And by the same organ we become mad and delirious, and fears and terrors assail us, some by night, and some by day, and dreams and untimely wanderings, and cares that are not suitable, and ignorance of present circumstances, desuetude, and unskillfulness. And these things we endure from the brain, when it is not healthy, but is more hot, more cold, more moist, or more dry than natural, or when it suffers any other pretenatural and unusual affection [...] (14).

## and from Chap. 15:

As long as the brain is at rest, the man enjoys his reason, but the depravement of the brain arises from phlegm and bile, either of which you may recognize in this manner: Those who are made from phlegm are quiet, and do not cry out nor make a noise; but those from bile are vociferous, malignant, and will not be quiet, but are always doing something improper. If the madness be constant, these are the causes thereof. But if terrors and fears assail, they are connected with derangement of the brain, and derangement is owing to its being heated. And it is heated by bile when it is determined to the brain along the

blood vessels running from the trunk; and fear is present until it returns again to the veins and trunk, when it ceases (15).

The *Epistles*, or at least those referred to here, like most of the *Corpus*, have authors other than Hippocrates and were written in a later period. They are not, therefore, a real correspondence between Hippocrates and Democritus, but rather an amusing elaboration of an anecdote that was being told and which had become a pretext for speaking about a type of remedy that was fashionable at that time.

The anecdote recounts that the inhabitants of Abdera, an ancient city in Tracia, land of Democritus, were worried about the mental health of the philosopher, who mocked and criticized everyone always with a smile on his lips, so they invited Hippocrates to come and have a look at him and treat him, because according to them someone who behaved like that must be mad.

And madness was treated with hellebore.

The letters as such became the occasion to speak about this treatment and for Hippocrates to say that hellebore should be given not so much to Democritus but rather to the inhabitants of Abdera for their superficial judgements.

Here are two short excerpts from two of the Epistles.

Letter from Hippocrates to Democritus:

The letter you send me criticized the idea of using hellebore medicinally...When I met you, I realized, by Zeus, that this wasn't a case of losing one's mind, but of intense mindfulness. So I eagerly praised your nature and judged you the best interpreter of Nature and the cosmos; I blamed those who had brought me there and labelled them madmen. They were the ones who needed the medicine, not you. ... the best thing would be for you to write to me often and share with me any books you've written. I've enclosed my treatise on hellebore for you to read. [...] (16).

Hippocrates' letter to Democritus about the uses of hellebore

Persons, who are not easily purged upward by the hellebores, should have their bodies moistened by plenty of food and rest before taking the draught. When one takes the draught of hellebore, one should be made to move more about, and indulge less in sleep and repose. Sailing on the sea shows that motion disorders the body. When you wish the hellebore to act more, move the body. Hellebore is dangerous to persons whose flesh is sound, for it induces convulsion. The spasm that follows the draught is deadly. In a super purgation should spasm or choking occur, that is a bad sign... It is necessary to purge with hellebore one who has a fluxion that descends from the head; it should not be given in cases of empyema; do not evacuate pale or raucous people, those with an affected spleen, anaemic, those with laboured breathing, or dry cough, [...] (17).

The description of hellebore and how it works has previously been mentioned.

However, this treatment was considered to have a specific therapeutic action on melancholy, mental disorders in general, epilepsy and other pathologies of the brain.

The purgatives were then justified because they integrated well with the Hippocratic theory of 'humors' or bodily fluids, that considered illnesses, not just the psychiatric and neurological ones, to be a consequence of corrupt humors or their imbalance.

The purge, eliminating corrupt humors and facilitating a rebalancing of healthy ones would thereby promote healing.

This hypothesis of disease intended as a phenomena, which involved the entire organism with aetiology being related to the humoral theory survived up until the time of Morgagni (18), the pathologist who altered the Hippocratic concept of illness (no longer a phenomena that concerned the entire organism but the consequence of a lesion that had as characteristic elements the seat and nature of the lesion itself), in the second half of '700.

That purging could be useful in many or almost all diseases is a concept that has remained in popular culture, and in many cases even in medicine almost to the present day.

Starobinski, cited by Huldrych M. Koelbing, in this *History of Medical Therapy* (19) speaking about

hellebore therapy, considers it to have the ideal requisites to be included in that which he calls "fairy tale pharmacology".

It is surely so, (even if the overall judgement, although based on empirical assumptions, cannot be so cutting), for the importance of the myth in attributing to this plant miraculous effects, that have gone, as Koelbing says (20), well beyond the clinical indications, so much so as to be used by intellectuals, "from ancient times until the beginnings of the modern age" as a type of drug "to sharpen their wits."

Moreover, many centuries earlier, Petronio Arbitro, in one of his *Satires* had already noted: and Chrysippus three times with hellebore did purge himself in order to succeed in his discoveries (21).

On the subject of hellebore and madness, it is also worth mentioning a particular nosography category indicated in *Corpus Hippocraticum* in the *De virginum morbo* libellous that talks about "the madness of the virgins".

This category does not exist in modern nosography, but it could be of some significance, in a historic-anthropological sphere, as an expression of the culture and beliefs of that period, but which has also led to certain idioms, proverbs and beliefs that are still around even today.

This topic has also been dealt with in a recent publication by Francesca Marzari (22), previously mentioned for her book on Melampus.

In the Hippocratic text the condition of virginity is said to be dangerous during the period from menarche to matrimony.

The reasoning behind this concept is again the humoral theory interpreted with a great deal of fantasy.

With the occurrence of the first menstruation virginity represents an obstacle, albeit partial, to the normal outflow of corrupted blood and that brings about negative effects and a humoral unbalance, creating a condition of extreme psychological fragility and vulnerability while also causing an alteration of sexual instincts.

The therapy indicated for a lasting resolution for this condition of fragility was in fact marriage.

An example as to what point this psychological disturbance and alteration of instincts can reach would be the story of the Proetides as previously mentioned.

No one nowadays would dream of sustaining this type of hypothesis. But quite often, even today, both as friendly advice and the assertions of some doctors, a girl who has psychological problems or psychosomatic disturbances is often told, "Get married! You'll see everything will work out for the best"

A last note on hellebore in Hippocratic Greece, perhaps in the past, but certainly in the centuries to come, concerns health tourism for this therapy, similar nowadays to a stay in a spa resort for medical care.

The city where he went to cure madness was Antikyra in the gulf of Corinth was well known because of the excellent hellebore that grew there naturally.

Antikyra also became part of proverbial sayings.

Telling a person "Αντιμίροας σε δεῖ" (*Antikìrras se dèi*) that is to say "You should go to Anitkyra!" had the same meaning, as "You need a good dose of hellebore!"

Hippocrates' doctrine and especially the humoral theory, continued to be the main reference point for medicine throughout ancient times, both in Greek and Alexandrian and Roman areas, due to the fact that many doctors working in Rome were in fact Greek.

Dioscorides (I century A.D.) has previously been cited for his *De Materia Medica* in which hellebore had been adequately presented and discussed.

Many others could also be remembered.

Some of whom were extremely good psychiatrists.

However, I will limit myself to Aretaeus of Cappadocia (I century A.D.) and the great Galen (II century A.D.) who, as far as psychiatry is concerned, were renowned for their important contributions to the nosography definition of madness and were the forerunners of psychosocial therapies associated with pharmacological ones, also acknowledged by Pinel and Esquirol, french psychiatrists of the early nineteenth century, considered to be the fathers, with their "moral therapy" of an antipositivist psychiatry.

Galen is one of the most famous physicians of Ancient times and, together with Hippocrates, greatly influenced medical thinking in the centuries to come.

He had a Hippocratic approach that was in tune with Plato's philosophical doctrine of the soul and with Aristotle's naturalism, which was in his opinion of Alessandrian derivation.

In his pharmacological works, when speaking about madness, hellebore is omnipresent and recom-

mended, however with the advice that it should be used sparingly and carefully due to the negative effects that excessive doses could cause (23).

Medicine in Rome, after Galen, continued to maintain the format of the Maestri, expressed by many illustrious figures such as Caelius Aurelianus, in the V century A.D, an excellent psychiatrist not only as a clinician but also for his commitment to improving assistance for the insane.

With the fall of the Western Roman Empire however there began a decadence that led fairly rapidly to the destruction of that medical and philosophical culture that had per se characterized the levels of that civilisation to which there would be a somewhat laborious return only many centuries later.

The concepts of Hippocrates and Galen were however maintained in the East and later in Arab medicine in the centuries around one thousand, from which illustrious figures are remembered who were at the same time both physicians and philosophers, some of whom, such as Avicenna (980-1037) and Averroes (1126-1198) found a place, together with some of those Ancient physicians mentioned previously, in Dante's limbo:

I saw the worthy categorizer of herbs, Dioscorides, I mean; and I saw Orpheus, Tully, Linus, Seneca the moralist, Euclid the geometer, Ptolemy, Hippocrates, Galen, Avicenna, And Averroes, who wrote the Commentary (24).

In Luciano Sterpellone and Mahomoud Salem Elsheikh (25) we can find some of these representatives of Arab medicine who had also written about psychiatry, among these Rhazes (865-925) that in his Continens Liber (the Virtuous Life) actually dedicated four chapters to illnesses that can afflict the mind and body and Avincenna in his Canon of Medicine maintains the theories of Hippocrates and Galen of black bile being the cause of melancholy. Rhazes should also be remembered because he is attributed to introducing the term "psychotherapy" into medicine.

In fact, hellebore was present in the pharmaceutical handbook of both of them, even though Rhazes recognised the potential effectiveness of hellebore when treating melancholy, he gives preference to the "Armenian stone because it is less toxic" (26).

In the West, the Middle Ages particularly the High Medieval Period, was, as far as the treatment of the insane and contemplations on madness were concerned, a time of great involution. Mental disorders were often considered as divine punishment for a wrongdoing and patients as being possessed by demons and consequently treated as such.

An initial recovery of the conceptions of Hippocrates and Galen only came about with the birth of the first Universities and with them the "De Materia Medica" of Dioscorides and Galen.

Hellebore, however, was always present in medieval prescriptions.

In medieval pharmacopoeia in which the Simples played an important role, other purges were also to be found, which had even been used empirically in indications previous to hellebore.

Furthermore, in the treatment of madness, bloodletting also became more and more frequent, a therapy that had been used since the earliest of times usually, however, for other indications.

Moving on to the next century, the treatment of madness in the hospitals for the insane of '500 and also its classification was dealt with by Lisa Roscioni in a recent publication entitled *Il governo della follia. Ospedali medici e pazzi nell'età moderna* (The governement of madness. Hospitales, doctors and madness in the modern age).

Moreover, it recounts the experience of Salustrio Salviani, a Roman physician, who worked for a decade during the second half of '500, at the Hospital S. Maria della Pietà, and published *De melancholia et mania morbo et eius curattone*.

Taking advantage of these and other evidence found in publications of that era, provides us with information on the purges, and their supposed purpose (basically still that of Galen and Hippocrates), on the extent of their application and also on blood letting and on the comparison that was already being made between these two different types of treatment.

[...] original are the observations of Salviani concerning the practice of blood letting, widely used since ancient times not only in the treatment of madness. He strongly recommends phlebotomy in the cases of mania and melancholy disagreeing with an extremely common practice of the sixteenth century.

[...]Purges represent another classic therapy of modern times: they were applied to practically all types of complaints. The French physician Pierre Pigrey, in his famous surgical manual, thus describes the purge and its effects as opposed to blood letting: the purge is an evacuation of humors that due to its corruption or poor quality offends the body [...]. The purge is different from the mission of the blood because it separates, and arrests the corrupted humors [...] it cleans and evacuates them and leaves what is necessary to nature, but phlebotomy on the contrary evacuates all humors equally both the good and the bad. [...] Three are the medications for purging: "strong" such as hellebore and mercury, "weak" such as manna or prunes, "moderate" such as rhubarb or senna. [...] (27).

(Salviani) In the case of melancholy advise, above all, the syrup of hellebore "medically of high repute for the infirmity of melancholy and particularly in the case of madness" [...] However in the case of mania, Salviani suggests, more that a purge, the administration of a syrup made from poppy, in order to placate the maniac and humidify and warm the damaged parts. [...] Lastly in the case of particularly severe and persistent melancholy and mania Salviani advises a syrup of chicory or apple, decoctions of lettuce, melissa and cuscuta. One of these, the syrup of apple, together with that of hellebore is one of the "classics" in the pharmacological treatment of madness (28).

In the centuries to come there was neither any change in the conditions for the insane nor in the treatment for madness.

It was only in the age of the Enlightenment that it again found its place in medicine and its classification as a somatic disease.

As previously mentioned, the turning point was determined by the work of Morgagni, who had radi-

cally changed the concept of disease, by anchoring it to pathological anatomy.

Medicine as a whole assumed a precise naturalistic and positivistic approach and this also involved psychiatry with a neurobiological orientation that maintained its absolute prevalence until the mid '900.

In that period, however, there were also the believers in psychogenesis who defended the hypothesis of an aetiology of psychic disorders that was not simply organic.

It was not an opinion of the majority, but due to their initiative it greatly contributed to an improvement of psychiatric patients in the institutions.

Among these were the french psychiatrists Philippe Pinel and Jean Etienne Esquirol. With their 'moral treatment' they were only the forerunners to a way of seeing and treating psychic disorders that was developed and established very much later.

It was in fact thanks to Psychoanalysis, Phenomenology and the cultural movement born in the mid '900 that the conditions were created for that cultural, healthcare and therapeutic revolution in the decades to come.

As the approach was certainly not conducive to medical treatments, I started from what they had written in order to learn whether the hellebore therapy at the beginning of the '800 was a treatment practised at that time and to find out what their judgement of it was.

This is what Pinel says about hellebore:

It was a point of doctrina among the ancients the use of hellebore in maniacal diseases, the choice, preparation and administration of that vegetable; the preliminary remedies and precautions adopted to promote its action and to prevent its pernicious effects, formed among the ancients a regular body of doctrine. Experience proved that this drastic sometimes produced violent hypercatharsis, obstinate vomiting, convulsions, inflammation of the intestines and even death. reader is referred for a detailed account of this subject to the articles Elleboro Elleborismo, in the Encyclopedie Methodique. Whether we consider its empirical administration or the unfounded theories and superstitious fancies which in some instances sanctioned its employment, the

disuse into which this remedy is fallen, ought to cause little regret. The history and distinctions of the disease were neglected through the excessive and infatuated attention to the remedy. The science of medicine, enlightened by the acquisitions of chemistry and botany, is now happy in the possession and choice of purgatives and emetics, the effects of which are more determined, and not succeeded by any dangerous consequences; however medication must always be regarded as an accessory of which a much less indiscreet use is made, due to the fact that we have more extensive views and safer resources together with other moral and physical means (29).

In Pinel's opinion, therefore, hellebore should have been banned, but purgatives and emetics were therapies that could still be practiced, to be included, however, in a much more articulated and important context of therapy.

This is what Esquirol wrote:

The ancients only knew hellebore. The moderns made lavish use of bloodletting, purgatives and showers. However Aretaeus of Cappadocia, Celsus and Caelius Aurelianus drafted the first outlines of the moral treatment, while Erasistratus and Galen provided a successful implementation. Later pharmaceutical methods were abandoned for empiricism; moral treatment was also completely abandoned (30).

As the causes of madness are general and individual, physical and moral so also the remedies will be general or individual, physical and moral and it is often necessary to vary, combine and modify their means of employment; for there is no specific treatment for insanity (31).

Evacuates have been celebrated from very ancient times and for a long period formed the basis of treatment in insanity, particularly melancholy. However they are not always suitable [...] Their choice is by no means indifferent; sometimes the drastics are preferred, sometimes the wormers, sometimes the sweets; [...] Hellebore, gambage,

bryony, aloes, submirate of mercury and especially the tartrate of antimony and potassa together with purgative mineral waters are used at will (32).

For Esquirol, who was Pinel's pupil, purges played only an extremely limited and marginal role in the treatment of madness, but hellebore still had a place in his pharmacological baggage.

And from Hippocrates more than 2200 had passed!

However, besides the official medical field and the empirical ones as a medication, hellebore was also to be found in literature as co-protagonist in short anecdotes or even sad and dramatic documentations, that proposed, albeit with different interpretations, its therapeutic effects or also, as a keyword, common sayings and proverbial expressions, which had become symbolic aspects of a culture in which the terms of madness and hellebore had also taken on ironic and paradoxical meanings. It is exactly in these cases that proverbial sayings express as, Manzoni would say, the "wisdom of mankind", if we intend this as scientific knowledge.

Wisdom is also an expression of a culture derived from convictions that are handed down and then sooner or later adapted with the evolution of knowledge. Wisdom is also however and perhaps more so, the defused and ironic evaluations and behaviours even for things that are in reality much more serious.

The presence of hellebore in not just medical literature is in any case a presence that has persisted here too for well over two thousand years.

Here are just a few examples of this:

I'll go back to Lucian and his *Dialogues of the Dead* in which I already mentioned the one between Menippus and Tantalus and to be exact with that between Diogenes and Alexander.

It is a dialogue which for our purposes allows us some psychopathological considerations; it is also, however, above all, a desecrating dialogue between the "Great" Alexander and Aristotle, "the maestro of those who know", as Dante says, that in literature have had and have, in general, a very different type of treatment.

From a psychopathological point of view, Alexander, teased by Diogenes, expresses delusions of immortality, but more by his behaviour that by his expressions, he also manifests a state of depression.

And it is exactly for the latter that Diogenes considers hellebore, however in Hades there isn't any, so he falls back on hydrotherapy with water from the Lethe, which in Greek mythology is the river of oblivion.

Diogenes

Dear me, Alexander, *you* dead like the rest of us? *Alexander* 

As you see, sir; is there anything extraordinary in a mortal's dying?

**Diogenes** 

So Ammon lied when he said you were his son; you were Philip's after all.

Alexander

Apparently; if I had been Ammon's, I should not have died.

 $[\ldots]$ 

Alexander

I have lain in Babylon a full month to-day; and Ptolemy of the Guards is pledged, as soon as he can get a moment's respite from present disturbances, to take and bury me in Egypt, there to be reckoned

Diogenes

I have some reason to laugh, you see; still nursing vain hopes of developing into an Osiris or Anubis! Pray, your Godhead, put these expectations from you; none may re-ascend who has once sailed the lake and penetrated our entrance; Aeacus is watchful, and Cerberus an awkward customer. But there is one thing I wish you would tell me: how do you like thinking over all the earthly bliss you left to come here your guards and armourbearers and lieutenant-governors, your heaps of gold and adoring peoples, Babylon and Bactria, your huge elephants, your honour and glory, those conspicuous drives with white-cinctured locks and clasped purple cloak? does the thought of them hurt? What, crying? silly fellow! did not your wise Aristotle include in his instructions any hint of the insecurity of fortune's favours?

Alexander

Wise? call him the craftiest of all flatterers. Allow me to know a little more than other people about Aristotle; his requests and his letters came to *my* address; *I* know how he profited by my passion

for culture; how he would toady and compliment me, to be sure! now it was my beauty--that too is included under The Good; now it was my deeds and my money; for money too he called a Good--he meant that he was not going to be ashamed of taking it. Ah, Diogenes, an impostor; and a past master at it too. For me, the result of his wisdom is that I am distressed for the things you catalogued just now, as if I had lost in them the chief Goods.

### Diogenes

Wouldst know thy course? I will prescribe for your distress. Our flora, unfortunately, does not include hellebore; but you take plenty of Lethewater--good, deep, repeated draughts; that will relieve your distress over the Aristotelian Goods. Quick; here are Clitus, Callis-thenes, and a lot of others making for you; they mean to tear you in pieces and pay you out. Here, go the opposite way; and remember, repeated draughts (33).

A much more complex anecdote in which hellebore plays a leading role is that told by Horace in one of his Epistles (which in fact chronologically precedes the story of Lucian).

Someone from Argos, by the will of his relatives, was treated with hellebore for his madness, but although the result was in fact positive he was by no means happy.

Many centuries later, Erasmus of Rotterdam in his *Eulogies of madness* commented on the affair.

The madness this person was affected by we could define as a chronic delirium of fantasy with a strong hallucinatory component, which permitted him pleasant evasions without creating any significant repercussions on his personal and social behaviour.

Horace:

Once at Argos there was a man of some rank, who used to fancy that he was listening to wonderful tragic actors, while he sat happy and applauded in the empty theatre – a man who would correctly perform all other duties of life, a most worthy neighbour, an amiable host, kind to his wife, one that could excuse his slaves, and not get frantic if the seal of a flask were broken, one

that could avoid a precipice or an open well. This man was cured by his kinsmen's help and care, but when with strong hellebore he had driven out the malady and its bile and had come to himself again, he cried:

"Egad! You have killed me, my friends, not saved me; for thus you have robbed me of a pleasure and taken away perforce the dearest illusion of my heart" (34).

And this is Erasmus's comment:

By which you see he liked it so well that he lost it against his will. And trust me, I think they were the madder of the two, and had the greater need of hellebore, that should offer to look upon so pleasant a madness as an evil to be removed by physic (35).

The narrative of hellebore in literature, a few years after the publication of Erasmus's *Eulogy*, which is 1511, encounters another significant event, this time real and extremely sad: the madness of a great poet, Torquato Tasso.

Tasso's madness is an important aspect of his biography that scarred him for the rest of his life.

It started to become apparent, shortly after he reached the age of thirty, around 1575, with behavioural problems that gradually got worse over the following years.

In 1579, he was admitted to the S. Anna hospital in Ferrara, after, in the grip of persecution mania, he had attempted to kill a servant who he believed had been spying on him, under the orders of Duke Alfonso D'Este, at whose court he resided.

Montaigne, in a short note in the XII chapter of the 2<sup>nd</sup> volume of *Essais*, describes his visit to the invalid that took place in 1580, when he found Tasso chained and locked up in a cell for "furiosi".

I had more irritation than compassion at seeing him at Ferrara in so pitiful a state, surviving, not recognising himself or his works that, without his knowledge but before his very eyes, went to press incorrect and inform (36).

According to present day nosography classification, Tasso's insanity could be defined as a schizoaffec-

tive psychosis, in which his mood disorder, characterised by severe alternating episodes of depression and mania, was overlaid by animated delirious, persecutory activity and probably, above all in the maniacal phases, also megalomania.

Tasso spoke often of his madness in many of his *Letters* (37), written to relatives and various personalities, even demonstrating a certain self-awareness of his illness, moreover for the most part only partial. The letter in which he speaks about hellebore was written in 1589, after his release from the S. Anna hospital and was addressed to the physician Giovanni Antonio Pisano.

In it, after expressing his distrust in the doctors who were treating him he says that in any case it is not possible to do without medicine and with a reference to the correspondence between Hippocrates and Democritus, which I have previously mentioned, suggests a similarity between his situation and that of the "crazy philosopher" who was not really mad even by Hippocrates' judgment, saying that he, too, wanted to be treated with hellebore.

This is a passage from the letter.

[...] but I must accept the opinion of the doctors even if what they said was to deceive me rather than cure me. But should my care be not hopeless, as could be argued according to the many signs given by Hippocrates, I would not want to be abandoned of their help.

The barbarians, said Hippocrates, "nulla utebantur medicina" but to me who is almost nourished in the study and arts of the Greeks, this injustice should not be done.

[...] Therefore your lordship I commend myself [...] because for you it is easier to write rather than visit in this heat, having began the purge on the advice of these doctors. But as some are of the opinion that the distillation of the head is the main cause of the infirmity, I cannot pass over in silence what Hippocrates writes to Democritus: "Veratro elleborato eos, quibus de capite distillate rheuma". And though this has been said with some warnings and some conditions, I would nevertheless like to be purged with the black hellebore, yes because this ancient medicine both

for the heroes and the philosophers who likewise were medicated (38).

It would, therefore, appear that Tasso had begun treatment with a purgative that wasn't hellebore that in that period was still being used for psychiatric disorders but was no longer the treatment of choice, that he didn't trust the doctors who were taking care of him and for this reason he had asked for a sort of supervision or control by Pisano and that treatment with hellebore would not displease him, because besides being a famous remedy, it permitted him to be included in a host of illustrious persons who had taken it or been recommended it, such as Democritus, who had been unjustly derided and considered to be mad.

This interpretation can also be substantiated by another letter, that he had written to Scipione Gonzaga two years before, describing his condition.

I am not very healthy, and so melancholic that I am reputed to be crazy by others and myself, when not managing to conceal many boring thoughts and anxieties of a sick and perturbed mind, I break out into very long soliloquies, which if some people (and they could be many) have heard, to many are my plans known, and it is that what I hope and what I most desire (39).

In the centuries to come, hellebore, despite being used much less frequently as a medication for insanity, in any case remained as a term connected to it, both as a figure of speech, and for learned quotations.

One example of its widespread diffusion is its presence, used ironically, in a well-known work by the English author and literary critic Samuel Johnson, *The Life of Milton*, published in the late '700 as part of one of his most important works, *The Life of the Most Eminent English Poets*.

Johnson recounts that Milton was only inspired to write poetry in the period from the autumn to spring equinox and what he wrote during the other seasons was never to his liking and it ended up being thrown away.

Johnson's words were reiterated a few decades later by G.B. Brocchi in a book entitled *Lettere sopra la Divina Commedia di Dante*. Brocchi wrote or pretend-

ed to write to an English Lady, who speaking about the changing poetic inspiration of various poets and referring to the *Life of Milton* says:

Johnson in the critical and geographical Preface of this poet's works, mocks the claimed influence that the seasons have on the soul and, with typical English frankness, sends anyone who believes it to purge his brain with a good dose of hellebore (40).

A final example, and we are by now in the '900, is D'Annunzio. Hellebore appears in *La figlia di Iorio* and its meaning must be seen as a cultural expression within a tragedy, that takes place in a rustic and superstitious environment, where ancient rituals are repeated but the drama has a primitive feel, where there are still mega-sorcerers, Iorio, women suspected of witchcraft, his daughter Mila and the old herbalists.

The following is a short passage from the 2<sup>nd</sup> Act, where there are the protagonists, Aligi, the male lead, Mila his lover and as a background character, Anna Onna who is, in fact, the 'old woman of the herbs':

Aligi

Yea, verily, you have partaken of honey, wild honey That your mind is thus troubled! And you would go whither?

Mila

Pass on thither where all roads are leading *Aligi* 

Ah! Will you come then with me? O, come ye with me!

Though full long the journey, you, also Mila, Will I place on the mule's back and travel. Cherishing hope toward Rome the eternal! *Mila* 

Needs be that I go the opposite way. With steps hurried, bereft of all hoping. *Aligi* 

Anna Onna! Up, arouse you! Go and find me Grains of black hellebore, hellebore ebon To give back to this woman her senses.

Born out of curiosity and destined to be a short research on a forgotten psychiatric therapy, not for a reading of a psychiatric text but for the reminiscence of a myth from classical antiquity, this work has, unintentionally, finished up being a journey into what has been the longest psychiatric therapy practised of all time, that has given an insight, if only as a background, of aspects in the anthropological history of madness and also look into topics that had been removed from psychiatry because they concerned things that were not well liked (the treatment with hellebore was after all only "a purgative") or in any case, quite rightly, were no longer of interest.

The conclusions to this, however, can only be questions to which there is no easy answer.

How come a treatment so far removed from the criteria of present day therapies could continue to be practised, albeit with a gradual modification of some aspects of its specifications, for almost or perhaps even more that 2500 years?

Were the persons who practised it healed or did they at least have some sort of benefits?

If it was maintained, as an empirical practice for so long the answer would appear to be the affirmative.

What then, is the reason?

I have happened to say, when speaking about medicine in general, that if we look at medical treatments during the last centuries, but often even of those of a few decades ago, that we were taught at University, we can only conclude that all too often patients got better *in spite of the treatment* and that, if this were not so, medicine would be long dead and could in no way have survived (41).

The reasons are manifold.

One of these is that often in treatment *the therapy is the doctor*, more so than the drugs, the doctor that in his relationship with the patient puts himself at stake, in such a way that it helps the patient and nature do their bit. But perhaps, indeed certainly, this is only part of the answer.

Perhaps one non-psychological reason, in the hellebore therapy can also be hypothesized.

In medical therapies, even in those in official medicine, all too often the starting point is a casual observation, then there is the empiric application and only later follows a scientific explanation.

So it was with penicillin, born out of a culture of moldy germs, from which Alexander Fleming was able to grasp its unimaginable significance.

The same happened in psychiatry, for the shock therapies, from Sakel's insulin therapy to Cerlettis's electroshock and the first psycho-pharmaceutical drugs, and already in the fifties of the last century, with chlorpromazine and Lithium salts, which are still on the market even today.

Basically hellebore therapy, too, considered both drastic and dangerous, was, therefore, a type of shock therapy and could, in my opinion, be likened to insulin comas.

One reason, in the lack of any neurobiological explanation, had been given by the psychoanalysts, with the hypothesis that improvement and healing mechanisms could have been traced back to the experiences of regression and care that this type of therapy involved for the patient.

I have tried to give a neurobiological explanation based on present day hypotheses of neuroscience and brain function, for some of the shock therapies including insulin therapy, which hasn't been used now for many years, but had in its time found numerous supporters.

If the brain is an organ whose job is that of consenting a relationship with reality and ourselves, intended as a psychophysical unit, and based on predetermined programmes or self-defined ones, shock therapies or at least some of them, could provide, the same as can be done in many electronic devices, a *resetting*, that is a cancelling of dysfunctional programmes and a refreshing of previous programming.

And madness, with this hypothesis, would only be a dysfunction of some of the congenital or acquired programmes that control the brain functioning (42).

These are discussions and assumptions on which book upon book could be written, without coming to any definitive conclusions and besides I don't know up to what point my neurobiological hypothesis could also pertain to hellebore therapy.

So

Above all when taking into consideration theories, convictions and also behaviour referring to the past, with great humility, considering the certainties of contemporary medicine, it is worth recalling the words of Karl Popper, a well-known Austrian epistemologist and philosopher of science with his *critical rationalism*: that various sciences all have their own specific characteristics defined epistemically, but are influenced and evolved together and therefore the basic theories and conclusions that are reached are never absolute and all

are provisional and fallible and therefore cannot arrive at definitive judgements when they concern previous hypothesis and theories that appear to be completely out-dated.

And I consider it therefore opportune to remember as I have already done on other occasions, what Adalberto Pazzini, the medical historian, wrote, many years ago, on the certainties of medical knowledge:

If today our interpretive ability provides a certainty of knowledge that seems to us greater than that of our predecessors, those who did not possess the possibilities of today's research were perfectly convinced, just like us today, of the truth and a correct interpretation of the facts. Astral pathology, demonic possession daily considered to be present, illnesses deriving from spells and sorcery, were no less true for yesterday's physician than today's microbial pathology, organ replacement, hormone imbalance, the profound imbalance of the composition of the blood. Ultimately, man always finds himself, albeit in a relative manner, in the same position when faced with scientific knowledge. Inasmuch as he always believes he knows what in fact he can never possess absolutely (43).

#### References

- Lucian. Dialogues of the Dead: Menippus & Tantalus. www. sacred-texts.com/cla/luc/wl1/wl158.ht.
- AA.VV. Storia della Medicina. Prolusioni di G. Armocida, E. Bicheno, B. Fox. Dizionario di S. Musitelli. Milano: Jaca Book; 1993: 162.
- Mattioli P.A. Commentarii in libros sex Pedacii Dioscoridis Anazarbei De Materia Medica. Venetiis; apud Valgrisium, 1554: 529.
- Simonis Paulli. Helleborus niger seu Veratrum niger. Quadripartitum Botanicum de Semplicium medicamentorum facultatibus. Francofurti ad Moenum: apud G.M. Oehrlingium; MDCCVIII: 379-648.
- Grande Dizionario Enciclopedico. Torino: UTET; 1976; XIX: 350.
- 6. Esiodo. Catalogo Esiodeo. Framm. 28 e 29.
- 7. Ovid. The Metamorphoses. XV: 324-6.
- 8. Teofrasto. Storia delle piante. IX: 10,4.
- 9. Pliny the Elder, The Natural History, XXV: 21. John Bostock, M.D., F.R.S., H.T. Riley, Esq. B.A., Ed.
- 10. Bacchylides, Epinicians Diane Arnson Svarlien, Ed Ode 11,

- for Alexidamus of Metapontion Boys' Wrestling at Delphi, Date unknown. Verses 48-58; 92-4.
- Bacchylides, Epinicians Diane Arnson Svarlien, Ed Ode 11, for Alexidamus of Metapontion Boys' Wrestling at Delphi, Date unknown. Verses 111-5.
- 12. Marzari F. Melampo. Breve biografia di un indovino guaritore. "I Quaderni del ramo d'oro on-line", 7: 2015. www.qro. unisi.it/ frontend/sites/default/files/Marzari Melampo.pdf.
- Ntafoulis P, Gourzis P, Trompoukis C. Melampous: a psychiatrist before psychiatry. History of Psychiatry. 2008; 19 (2): 242-6.
- Hippocrates. On the Sacred Disease, par. 17°, translated by Francis Adams, Written 400 B.C.E, The Internet Classics Archives.
- Hippocrates. On the Sacred Disease, par. 18°, translated by Francis Adams, Written 400 B.C.E, The Internet Classics Archives.
- 16. Littré E, Hippocrate, Oevres Complete, vol. IX, Lettre de Hippocrate au Democrite, J.B. Baillière, Paris: 1861, in Ippoccrate, Corpus Hippocraticum translated by Concetto De Luca, www.academia.edu/.../Ippocrate\_ ed\_Corpus\_ Hippocraticum: 386.
- 17. Littré E, Hippocrate, Oevres Complete, vol. IX, Lettre de Hippocrate au Democrite, J.B. Baillière, Paris: 1861, in Ippocrate, Corpus Hippocraticum translated by Concetto De Luca, www.academia.edu/.../Ippocrate\_ ed\_Corpus\_ Hippocraticum: 388.
- 18. Morgagni GB. De sedibus et causuis morborum per anatomen indagatis;1761.
- Koelbing HM. Storia della terapia medica, momenti fondamentali. Edizioni Ciba-Gegi, with introduction by Loris Premuda, 1989: 193.
- Koelbing HM. Storia della terapia medica, momenti fondamentali. Edizioni Ciba-Gegi, with introduction by Loris Premuda, 1989: 194.
- 21. Petronio Arbitro. Satira n.20: Qualche scappata sulle belle arti, translated by V. Lancetti. Wikisource; 107.
- 22. Marzari F. Paradigmi di follia e lussuria virginale in grecia antica: le Pretidi tra tradizione mitica e medica. "I Quaderni del ramo d'oro on-line", 2015; 7: 47-74. files/- Paradigmi di follia e lussuria.pdf/.
- AA.VV. Storia della Medicina. Prolusioni di G. Armocida,
   E. Bicheno, B. Fox. Dizionario di S. Musitelli, Milano; Jaca Book; 1993: 162.
- Dante Alighieri, Divina Commedia (The divine Comedy), Inf., IV, v. 139-44, translated by J.F. Cotter, www.italianstudies.org./comedy.
- Sterpellone L, Elsheikh MS. La medicina araba. L'arte medica nei califfati d'Oriente e d'occidente, ed. Ciba-Geigy; 1995: 274-78.
- Sterpellone L, Elsheikh MS. La medicina araba. L'arte medica nei califfati d'Oriente e d'occidente, ed. Ciba-Geigy; 1995: 276.

- 27. Roscioni L. Il governo della follia. Ospedali medici e pazzi nell'età moderna. Milano: Bruno Mondadori; 2003: 229.
- 28. Roscioni L. Il governo della follia. Ospedali medici e pazzi nell'età moderna. Milano: Bruno Mondadori; 2003: 230.
- Pinel P. Trattato medico filosofico sopra l'alienazione mentale. First edition in Italian and the second in French by Costantino Vaghi. Lodi: Tipografia Orcari; 1830: 268-9.
- 30. Esquirol JED. Delle passioni (a cura di M. Galzigna). Milano: Mimesis; 2008 da Des passions considérées comme causes, symptômes et moyens curatifs de l'aliénation mentale, Esquirol's doctoral thesis 1805: 59.
- Esquirol JED. Della alienazione mentale e della pazzia in genere e in ispecie, (version of L. Calvetti). Milano: F. Rusconi;1827: 92
- Esquirol JED. Della alienazione mentale e della pazzia in genere e in ispecie, (version of L. Calvetti). Milano: F. Rusconi;1827: 113-4.
- 33. Lucian. Dialogues of the Dead: Diogenes & Alexander. www.sacred- texts.com/cla/luc/wl1/wl158.ht.
- Orazio. Epistole, II, 2, 128-40, Full text of "Satires, Epistles and Ars poetica" - Internet Archive, translated by Roy J. Deferrari, https://archive.org/stream/.../satiresepistlesa00hora uoft\_djvu.txt.
- 35. Desiderius Erasmus. The Praise of folly, traslated by John Wilson, Preoduced by Shimmin R, www.fullbooks.com.
- 36. Montaigne M. Saggi (by F. Garavini e A. Tournon). Roma: Bompiani, 2012: 887-8.
- Tasso T. Lettere (collected and chronologically ordered by Cesare Guasti in 5 volumi). Firenze: Felice Le Monnier; 1852-55.
- 38. Tasso T. Lettere (collected and chronologically ordered by Cesare Guasti in 5 volumi). Firenze: Felice Le Monnier; 1852-55. Vol. IV: 221-2.
- Tasso T. Lettere (collected and chronologically ordered by Cesare Guasti in 5 volumi). Firenze: Felice Le Monnier; 1852-55. Vol. III: 262.
- 40. Brocchi GB. Lettere sopra la Divina Commedia di Dante (by Fabio Fabbrucci), G. Gropius, Berlino, 1837: 174.
- Maieron MA. Alla ricerca dell'isola che non c'è. Ragionamenti sulla mente, 2<sup>a</sup> ed. Milano Udine: Mimesis; 2012: 207.
- Maieron MA. Alla ricerca dell'isola che non c'è. Ragionamenti sulla mente, 2<sup>a</sup> ed. Milano Udine: Mimesis; 2012: 178.
- 43. Pazzini A. Storia della medicina. Milano: Società Editrice Libraria; 1947: 614.

Correspondence:
Mario Augusto Maieron
Chief of Psychiatry emeritus ASL Varese

(now Agenzia di Tutela della Salute – ATS - dell'Insubria) E-mail: mario.maieron@alice.it