

Murder Most Foul

The Poisoning of Hamlet's Father

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Abstract

The mode of Hamlet's father's untimely death is well known. Was this strange mode of murder chosen by Shakespeare as an almost perfect method of regicide, leaving no clues and planting the blame on a garden snake? Bartolomeo Eustachio had described the pharyngotympanic tube in 1564 some forty years before Shakespeare's play. Did the playwright know of this anatomical discovery from his son-in-law? Did the old King have a perforated tympanic membrane? Could contemporary poisons kill in the presence of an intact eardrum? Conversely, was administration of poison per aurem symbolic in Elizabethan times of something more sinister? Heretical religious arguments entered through the ear, such as might not lead only to illness of the body, but to "contagion" of one's immortal soul! The type of poison used by Claudius as suggested by Shakespeare is also examined. Suggestions are made as to how a poison administered through the ear might have acted, and to the cause of Hamlet's father's untimely death.

TRAGEDY OF HAMLET, PRINCE OF DENMARK

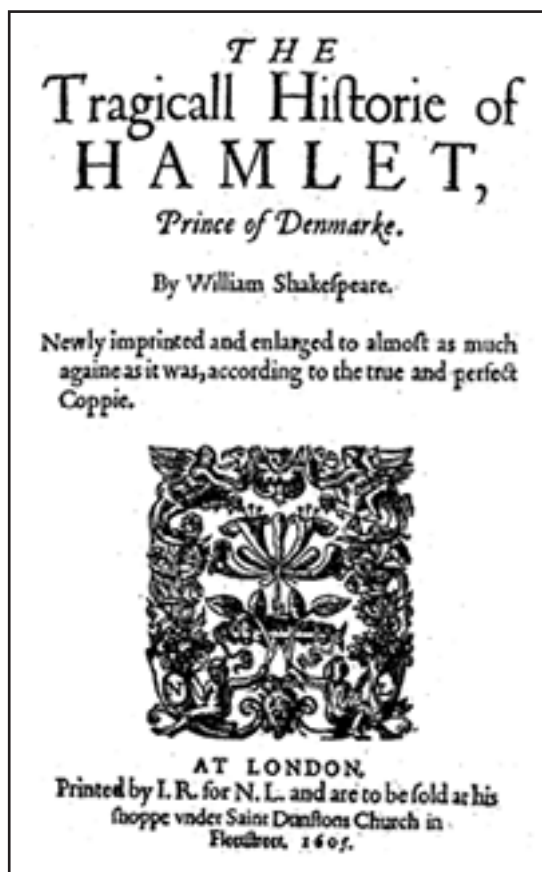


Fig. 1: Title page from 1605 edition

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There can be few otologists (and indeed possibly few physicians of any specialty), who on visiting the theatre to see this wonderful play have not been asked about the feasibility of poisoning a victim by pouring the poison into his ear.

William Shakespeare wrote *The Tragedy of Hamlet, Prince of Denmark* at the beginning of the 17th century. It contains quite a few

*Carnal, bloody and unnatural acts
... deaths put on by cunning
and forced cause.*ⁱ

The main plot of the play certainly fits into this category: the King of Denmark is murdered by his brother, Claudius, who then usurps his crown and marries his queen, Gertrude. He commits the murder by the ingenious method of pouring poison into the old king's ear whilst he is sleeping after a heavy meal. The drama begins with the ghost of the murdered king wandering the battlements of his castle, looking for his son, Prince Hamlet. It is when the Ghost meets Hamlet that the strange method of his murder is first brought to light. The Ghost tells his son,

*Sleeping within my orchard,
My custom always of the afternoon,
Upon my secure hour thy uncle stole,
With juice of cursed Hebenon in a vial,
And in the porches of mine ear did pour
The leperous distilment.*ⁱⁱ

This resourceful mode of murder chosen by Shakespeare is an almost perfect method of regicide, leaving no clues. If the ear of the dead man were examined, the coroner would only have found a brown fluid, which he would probably have taken for cerumen.

Evidently, the coroner in Elsinore blamed it on snakebite!ⁱⁱⁱ (This in fact would be unlikely since coroners did not exist as such in Denmark and are exclusive to Britain and her former dependencies. Shakespeare does however mention *The Crowner* later in the play (Act V, Scene 1, line 4).

The Ghost explains:

*The serpent that did sting thy father's life
Now wears his crown.*^{iv}

Thus the wicked uncle, who by now has married the queen, (Hamlet's mother) is exposed as an incestuous murderer. The ghost then pleads with the young prince

*If thou did'st ever thy dear father love
... Revenge his foul and most unnatural murder.*^v

Some Shakespearean critics consider that the whole play is a study in *revenge*. Certainly the drama is based on Hamlet's revenge, and does seem to revolve around his indecision and ongoing failure to get on and carry out his father's wishes, extract that re-

venge and kill his uncle, which only happens right at the very end. Rather than a study of pure *revenge*, however, the plot seems to be more of a continual struggle between Hamlet's desire for *revenge* and his *conscience*. He mentions conscience repeatedly in his soliloquies. The most famous soliloquy in the play (and perhaps in the whole of English Literature), which begins, "*To be or not to be*", ends with the conclusion that "*conscience doth make cowards of us all.*"^{vi} In another, he says

*The play's the thing
Wherein I'll catch the con-
science of the King!*^{vii}

This latter refers to Hamlet's ingenious idea of exposing his murderous uncle by asking a troupe of players, who happen to visit the castle to stage a play of his own design to the court. He calls this drama the "*Murder of Gonzago*", and portrays – hardly very subtly, - a fictitious king murdered by a close relative by having poison poured in his ear. The kinsman, in this case a cousin, then steals the crown! Claudius, as his nephew had hoped, is horrified at seeing the re-enactment of the murder he has himself just perpetrated; Hamlet's "*Mousetrap*" is thus sprung and his uncle's obvious guilt is as good as a confession.

IN THE PORCHES OF MINE EAR

This poisoning *per aurem* in *Hamlet* has evoked the interest of scholars and historians of medicine in the past. The actual fea-



Fig 2. Claudius pours poison into sleeping King hamlet's ear.

sibility has been called into question:^{viii,ix} can any material – even a non-irritating one, be poured into a sleeping persons ear? Is there not the great likelihood that the person would be awakened too quickly for any harm to be done? A second question, one must assume is directly consequent upon the first. If some substance has been successfully introduced in this way, then could sufficient poison be absorbed from or through the ear to cause death? Finally, what poison did Claudius use and how did it act? (Fig.2)

It has also been suggested that this type of poisoning is unique^x. This is certainly not the case: there are a few other examples. Shakespeare himself referred to one of them (“*Murder of Gonzago*”). The Duke of Urbino, who was married to Maria Gonzago, was allegedly poisoned by one of her relatives, Luigi Gonzago, who blew poisoned powder into his ear. This took place in 1538.^{xi} Two years following this however, was a much more celebrated case, which has inspired not only Balzac, but also the British otologist, Sir Terence Cawthorne,^{xii} the French otologist Albert Potiquet^{xiii} and the novelist, Lady Antonia Fraser^{xiv} to write about it. I believe this to be an important reason why Shakespeare chose this particular form of murder.

In 1560, King François II of France, who was a sickly youth, suffered an episode of earache, which was soon followed by a high fever, and ensuing coma and death.^{xv} Honoré Balzac (1799-1850) was a famous French journalist and writer, regarded as one of the creators of realism in literature. His huge production of novels and short stories are collected under the name *La Comédie Humaine*. In his account of the young king’s demise,^{xvi} he tells a tale of the adolescent monarch, who went for a sail on the River Loire to avoid witnessing an execution, which he had just ordered! The feckless king evidently failed to wear a muffler and

one of the cold winds that sweeps along the Loire at the beginning of the winter gave him so sharp an earache, that he was obliged to return to his apartments; there he took to his bed, not leaving it again until he died.^{xvii}

To a modern family doctor, this is a fairly descriptive history of acute suppurative otitis media proceeding in those pre-antibi-

otic days to a fatal otogenic brain abscess. His demise was a bit of a *cause célèbre* at the time, not least because Mary Stuart was King François’ wife, which meant that there were Protestant/Catholic implications and political intrigue right from the start. Ambroise Paré (the Royal Surgeon at the time) evidently suggested an incision of the abscess behind his ear. Perhaps luckily for Paré (but not for the king), his mother-in-law, Catherine de Medici was by the bedside and forbade the operation, telling the surgeon to put some medication in the ear! The king died and the youthful Queen Mary lost the first of her two thrones! (She later became Mary, Queen of Scots and was beheaded at Fotheringay Castle in England.) Perhaps the most amazing thing about the completely sad story is that Paré, the most eminent French surgeon of his day, (who was a protestant) was indicted for the king’s murder: it was alleged that he had instilled poisonous powder into the monarch’s ear, because white powder had been found in one of the royal caps.^{xviii} Happily, however, he was acquitted of the crime and it is now generally held that King François died of an otogenic brain abscess.

Shakespeare’s friend and fellow playwright, Christopher Marlowe also tells of ear poisoning in his final play, *Edward II*, (written about ten years before *Hamlet*, and in the year that Marlowe died in a tavern brawl) Once again, we hear of powder poured into the ear and once more, it is perpetrated by an Italian:

*I learned in Naples how to poison
flowers:
To strangle with a lawn thrust down
thy throat:
To pierce the windpipe with a needle’s
point;
Or whilst one is asleep, to take a Quill
And blow a little powder in his ear:
Or ope his mouth and pour quicksilver
down.*^{xix}

It is certainly interesting that the Italians come in for so much association with poisoning. In *Hamlet*, the prince says when talking to the actors, *His name’s Gonzago; the story extant and writ in choice Italian.*^{xx}

Pickard also states

Poisoning rose to the distinction of an art in medieval Italy and France, and as a character in one of the old plays says: "Poison speaks Italian."^{xxi}

At the beginning of the last century, Passow wrote in his book on *Injuries to the Ear* (1901)^{xxii},

It is reported from older times that murderers poured liquid metals into the ears of their victim.

He went on to say,

Hardly credible is the often-cited story of a woman who killed six husbands in this way!

Moreover, around that time, the famous otologist, Sir Sinclair Thomson tells of "poisoning" one of his patients by pouring aniline into the ear to treat a furuncle of the external meatus. Evidently, it turned the patient "*distressingly deep blue colour.*"^{xxiii}

In his otology textbook a few years later, Albert Gray described a method of anaesthetizing the deep recesses of the ear canal and eardrum with a cocktail of rectified spirit, cocaine and aniline, but warned about leaving the aniline in the canal for *not more than ten minutes.*^{xxiv} Otherwise this could give rise to a serious general systemic effect in which methaemoglobin is formed in the blood and this might make the patient go a distressingly deep blue colour!

IN A VIAL

The first problem faced by the murderer is the extreme sensitivity of the ear. Just touching the ear lobe is a very good method of silently wakening a sleeping comrade. This is well known to operational combat soldiers^{xxv} and was evidently used by Apache Indians. Otologists are all too aware of the problems faced when they prescribe therapeutic ear drops to a child. Young children are extremely resistant to having fluid put into their ears if it is not at body temperature. The experienced practitioner advises parents that the drops must be "like

Goldilocks' porridge – not too hot and not too cold, but just right." They might well be counselled to hold the drops in their hand (or their axilla) for ten minutes before attempted instillation. Shakespeare says that the poison was "*in a vial.*" This was presumably clutched in the murderer's hand and therefore at body temperature. Hamlet also adds,

He took my father full of bread^{xxvi}

So we are assured that the victim was sleepy and had probably also drunk some wine.

The integrity of the Tympanic membrane is of course pertinent to the discussion. If the eardrum was perforated, then the poison might run straight down the pharyngotympanic tube and into the throat. This raises the question as to whether or not Shakespeare knew about perforated eardrums and the Eustachian tube. The tube was well known to ancient Greeks, and in 1564 (just a few years before the publication of Hamlet) Bartolomeo Eustachio had described it in his popular anatomical text. It is known that the Bard was on very good terms with his son-in-law, Dr John Hall, who was the Stratford General Medical Practitioner and he could well have told Shakespeare about this.^{xxvii}

The second problem is a pharmacological one: can a drug poured into the intact ear canal be absorbed in sufficient quantities to cause death? Bucknill, who in 1860 wrote a splendid treatise on Shakespeare's medical knowledge,^{xxviii} considered it *an impossible manner of murder.* Bucknill may have held this contemporary opinion since it was generally believed during the second half of the 19th century, that human skin was impervious to all substances. However outrageous it might seem today, this absolute impermeability theory was later given great prominence by the work of the German pharmacologist, H. Fleischer.^{xxix}

At the beginning of the last century, it became apparent that absorption of many substances can and does take place through the epidermis and David Macht (an American toxicologist) made a few studies of absorption of drugs and poisons through unusual sites including conjunctiva, bladder, urethra, vagina and skin.^{xxx} In 1918, he also addressed

the particular problem of the possibility of the absorption through the intact and ruptured tympanic membrane.^{xxxii} He experimented on cats and rabbits in which he found that aqueous aconite killed a cat with an intact membrane in a few seconds. Nicotine took all of 15 minutes but that was also fatal. Aqueous solutions of the belladonna alkaloids were not absorbed but alcoholic preparations readily entered the circulation.

CURSED HEBENON

The actual identity of the poison, which Shakespeare had intended to implicate, has given rise to lots of speculation. This confusion arises from the three different names given to the drug in the early publications. In the first edition, the Quarto of 1603, it describes

With juyce of Ebona in a vial

Then the following year (Quarto 1604), *Ebona* changes to

cursed Hebona.

A much greater change takes place in the Folio edition of 1623, when it becomes

juyce of cursed Hebenon in a viall

Since none of these is the name of a poison, there is clearly a difficulty in pinpointing which drug Shakespeare had in mind! The poet is usually so punctilious about getting his medical details right however, and I shall try to convince the reader that clues, which he gives later in the play, leave us in little doubt as to the drug he actually meant.(fig.3)

Throughout the Shakespearean canon, literary scholars have been very vexed by different wording in the Quarto editions and the Folio. In the case of *Hamlet*, it seems probable that the play was most likely first performed in 1600. The so-called *Bad Quarto* edition of the play was published three years later, apparently without permission. Subsequently the following year (1604) saw the publication of the *Good Quarto*, which was claimed to be



Fig.3. Hebena or ebony (*Guaiacum Officinale*. L)

Newly printed and enlarged to almost as much again as it was, according to the true and perfect copy.^{xxxiii}

The Folio was printed in 1623, seven years after Shakespeare's death. A Folio was a very prestigious and special type of printed book in which the printed sheet is folded in half, making two leaves or four pages. Philosophers, historians and theologians had only hitherto reserved folios for important academic works. A folio consisting entirely of plays was unprecedented before *Mr. William Shakespeare's Comedies, Histories and Tragedies* published by Jaggard and Blount. (Ben Jonson's *Workes* had been published in 1616, but that had included prose and poetry as well as his plays.) The Folio edition certainly differed in many respects from the Quartos, with a few so-called superior alterations, but in some cases more errors.

The editing, changes and textual analysis of these editions are a study in its own right. Given that the names of some of the principle players in *Hamlet* undergo substantial changes (e.g. *Polonius* in the Folio was formerly *Corambis* in all the Quartos), a slight difference in the name of a drug hardly comes as a great surprise. In some instances, the editing is thought to have been done by the actors. A few critics, including those of the Oxford edition, see the Folio as *Shakespeare's own mature revision of his earlier draft.*^{xxxiii} One cannot help but feel that this

might have been somewhat difficult for him seven years posthumously! Other scholars consider that,

There is little evidence of sustained care in the proofreading of the Folio, and virtually none that the correction involved consultation of the original copy from which the text had been set.^{xxxiv}

The seminal and magisterial work on the printing of the first Folio is a huge two-volume book by Charlton Hinman^{xxxv}, in which he established which of the five seventeenth century compositors had set which pages! (A compositor is a typesetter in the printing shop directly responsible for the setting of the type for the printed word.) Although Hinman stated that there were five compositors in Jaggard's print shop, later researchers have suggested another four were involved, making a total of nine. These compositors were of course the earliest interpreters and editors of the handwritten manuscripts. One of the most famous changes made in *Hamlet* is by "Compositor D" (their original names are long lost), who seems to have made intentional changes when his copy did not make sense to him, such as the alteration of the life-rendering "Pelican" to "Politician" in Act IV, scene 5.^{xxxvi}

The notes for the identity of the poison in Furness's 1877 Variorum edition of *Hamlet* refer us to Zachary Grey's 'Critical, Historical, and Explanatory Notes on Shakespeare, with emendations of the text and metre'. This encyclopaedic text in two large volumes usually provides the answers to the most obscure Shakespearean semantic problems, but in this case, Grey (an English clergyman [1688-1766]) puts a very strange interpretation on the word *hebenon*:

This stands, by metathesis, for henebon, that is, henbane, of which the most common kind (Hyoscyamus niger) is certainly narcotic, and perhaps if taken in a considerable quantity might prove poisonous.^{xxxvii}

A metathesis is a linguistic term for changing the position of a consonant in a word.^{xxxviii} Two examples of this are in the words *hasp* and *clasp* in which the *s* and the *p* alter their

order: their earlier English forms were *hæpse* and *clapse* respectively. Another example, which still survives in vulgar use (particularly in the West Indies) but was formerly used quite properly is the swapping around of the *s* and *k* in the verb, *ask*. In like manner, the word *hebenon* becomes *henebon*, which sounds quite similar to *henbane*.

Hardly surprisingly, this metathesis theory does not meet with universal approval. Metatheses and transliterations like this are extremely rare in the rest of Shakespeare's works. Nicholson in 1879 at the 55th Meeting of the Shakespearean Society even went so far as to ask,

What would Shakespeare have proposed to himself by changing Henbane, the name of a known poison, into an unmeaning jumble of syllables? And why should he have thought it necessary in such a case to change a into o & c?

And to conclude:

That a more baseless conjecture, and one more contrary to the known facts, has ever been proposed on a Shakespeare passage.^{xxxix}

Henbane

Despite Nicholson's (and others') objections, it would appear from perusal of the literature on the subject that the majority of critics nonetheless favour that *henebon* is *henbane*.^{xl} Some older volumes of the *Complete Works* have a simple footnote explaining *hebenon* directly as *henbane*.^{xli} This is a not uncommon herb in Europe growing on wasteland and in sandy coastal areas. It is sometimes also known as *Black Bean*, *Jupiter's Bean* or *Cassilago*. It is a low growing foetid plant, with large dense clammy pubescent leaves and the whole plant, which is very glandular, is covered with sticky hairs. The dingy yellowish-brown flowers have obvious purple veins on the petals and the prominent violet anthers are borne on hairy filaments. It also carries large characteristic green fruit pods, which are capsule shaped like a small jar with a lid. It is surprisingly easy to find in the South West of England.



Fig. 4. Henbane (*Hyoscyamus Niger* L.)

Henbane was once used to decorate the hats of the Jewish high priests. It has been known to be very poisonous from antiquity and the ancient Gauls are said to have dipped their arrows in it. A contemporary 17th century account tells of

The poison'd henbane whose cold juice doth kill^{xlii}

One of the strongest reasons against Hebenon being henbane is that Henbane solution was a well-known therapeutic eardrop known as *balsam tranquillans* used extensively for earache and deafness. A late 16th century herbal by Gerarde tells us that

The oile or juyce dropped into the eares is good agaynste deafnesse^{xliii}

Just around the time that Hamlet was first published, an Englishman called Holland had produced a lavish coffee table volume of Pliny's *Natural History*^{xliv} in which it said that henbane could be used as eardrops but advised caution since confusion could result if too strong a solution was used. (What he actually said was *Oleum fit ex semine hyoscyami quod ipsam auribus infusum temptat mentum.*) Some critics who argue the case for henbane have used this, but it is really highly unlikely that Shakespeare would choose this substance for his dramatic and novel murder. It would be like the murderer in a 21st century drama creeping up and pouring a well known wax solvent in the ear!

Some writers have supposed *cursed hebenon* to represent hemlock (*Conium mac-*

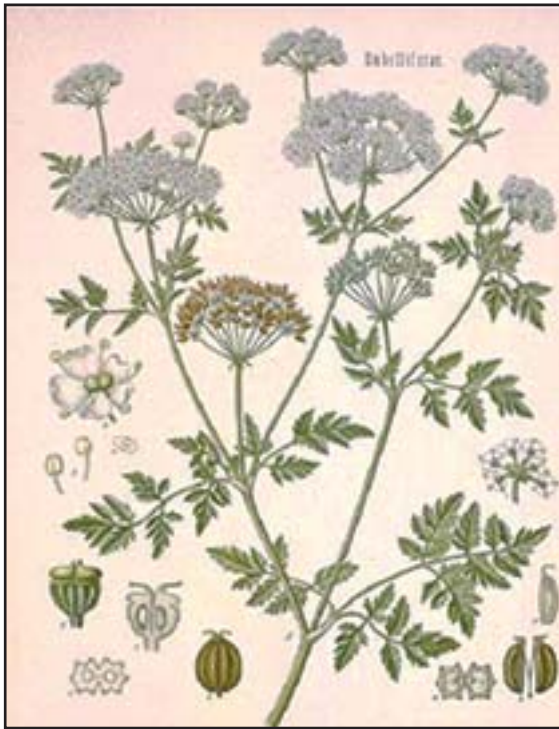


Fig. 5. Hemlock (*Hyoscyamus Niger* L.)

ulatum). Sir Laurence Olivier evidently falls into this category since in the film version adapted by him, *Hamlet* substitutes the word *hemlock* for *hebenon*. Hemlock was a well-known poison, perhaps best known for its use in ancient Greek executions, notably that of Socrates. This has been the subject of more than one artist's representation, perhaps the most famous of which was by David.

Beisley, in his book on the botanical aspects of the canon, entitled *Shakespeare's Garden*^{xlv} has suggested Deadly Nightshade as the culprit. *Solanum maniacum* is another common lethal herb belong to the Belladonna family.

Ebony (lignum vitae or Guaiacum) certainly does sound right. The trouble with this suggestion is that guaiacum is not poisonous! It makes you sweat and used to be used for the treatment of syphilis. In fact, far from being poisonous, it was thought to be an antidote to poisons and special wooden chalices made from ebony were used to taste dodgy wines.

The New Sydenham Society reported in their Lexicon that *hebenon* was in fact crude oil of tobacco (*Nicotiana rustica* L.). Macht had shown that this oil would quickly

cause death when poured into an intact ear canal. Notwithstanding this, he considers his suggestion that it is *hebenon* "preposterous"

It is however just possible because, as every British schoolboy knows, Sir Walter Raleigh introduced tobacco into the kingdom during the Elizabethan era. It is also noteworthy that Shakespeare amid a veritable cornucopia of other plants and flowers never refers to tobacco. It might well be that this was a tribute to the Bard's tact, since it was well known that King James was vociferous in his condemnation of the herb and had published a *Contrablast against Tobacco*.



Fig. 6. Deadly Nightshade (*Atropa Belladonna*)

Aconite, which had such a profound effect on the rabbit, is now a common annual bedding plant. It is a most beautiful flower but most gardening books warn you to wash your hands after handling it.

Heben

Although the name, Yew does not bear much similarity to hebenon, the Old English for yew (*Taxus baccata*) is *Heben* and can be found in contemporary poetry. In Christopher Marlowe's *Jew of Malta*, *Barabus* is preparing a concoction of the most toxic poisons he can find to murder his



Fig.7. Tobacco Plant (*Nicotiana Rustica* L.)



Fig. 8. Winter Aconite (*Aconitum napellus* L.)

daughter and includes Yew:

*In few, the blood of Hydra, Lerna's
bane,
The juice of Hebon, and Cocytus
breath,
And all the poisons of the Stygian
pool,*

The very poisonous nature of the tree itself was also well known. Perhaps for these reasons, it was sometimes called the Tree of Death. It is probably best known in Britain



Fig. 9. Yew (*Taxus Baccata* L.)

for growing in churchyards and this could be because it is also associated symbolically with Christ's Resurrection. A more cynical explanation of the association with this large tree near the church in the centre of the village was that it provided a plentiful supply of longbows to shoot the French! Yew trees exhibit amazingly longevity. The Fortingall Yew at Rannoch in Scotland is reputed to be 3500 years old, making it the oldest living organism in Europe! Some accounts put it at be-

tween 3000 and 5000 years. According to Alan Meredith, a yew enthusiast, who has devoted his life to the study of, and campaigning on behalf of yew trees, it is far older than this and he says it might even be 9000 years old.^{xlvi} The fact that yew trees have been planted in churchyards all these years ago might well give rise to scepticism about whether the tree has been planted near to the church or whether in fact the church has been built next to the tree. Indeed the yew tree has strong links with the old pagan religions, which recognize it as the most sacred tree in Europe and dedicate it to Hecate. They associate it with death and rebirth, presumably because they believe that the new twigs arise directly from the old dead wood.

Old superstitions also state that the roots of the graveyard yew grow into the mouths of every corpse buried around the church. It is also supposed that bringing a yew garland over the threshold of the house is enough to cause the death of one of the members of the family.

Shakespeare associates the Yew tree with death in more than one of his plays. In *Richard II*, we hear that archers

... learne to bend their Bowes
Of double fatal Eugh^{xlvii}

Here the implication is that the English archers' bows are not only fatal from the point of view of their deadly arrows, but also that the *Eugh* wood has an intrinsic toxicity. This is reiterated in *Macbeth*. As the witches dance around their cauldron, adding various herbal poisons to their *Hell-broth*, along with the

Roote of Hemlocke digg'd i' the darke,

they also throw in some

... Slippes of Yew
Sliver'd in the Moones Ecclipse^{xlviii}

In *Twelfth Night*, it is emblematically connected with death in the *Clown's* song, in which we hear,

My shrowd of white, stuck all with
Ew,
O prepare it^{xlix}

It is worth noticing that although these three last references are all taken from the same Folio edition, the name of the subject tree is spelled differently in each case! Although not directly associating yew with death in *Titus Andronicus*, it could hardly be described in a less favourable manner,

*But strait they told me that they
would binde me heere,
Unto the body of a dismall yew*

which is situated in

*A barren detested vale ...
The Trees though Sommer, yet for-
lorne and leane,
Ore-come with Mosse, and balefull
Misselto.
Heere never shines the Sunne, here
nothing breeds,
Unlesse the nightly Owle ar fatall
Raven.ⁱ*

The extremely toxic nature of the tree is mentioned in *Lyte's Herbal* (1595), a book which Shakespeare almost certainly read,

*The yew, in High Dutch is Iben...It
grows in the Forest of Arden ... It is
so hurtful and venomous that such as
only sleep under the shadow thereof
become sick and sometimes they die.ⁱⁱ*

This idea that even sleeping under a yew tree could prove fatal might well seem extraordinary, but another 17th century text reiterates it. Holland's Pliny (1600) (mentioned above) says that

*The Yugh ... unpleasant and fearful
to look upon ... holds a deadly poison
... it is so venomous that whosoever
take either repose or repast under it,
are sure to die presently.ⁱⁱⁱ*

(It cannot have escaped the notice of the quick and intelligent reader that we now have reference to four different contemporary spellings of the tree, viz. Yew, Ew, Eugh and Yugh. This could be well used to support the weight of any arguments concerning Ebon, Ebona, Hebona, Heben, and Hebenon.)

A case where precisely this happened was recorded many years afterwards by Dr

Harmand of Mont Garni in Belgium, who tells of a fit 26 year old girl *of good constitution and in perfect health* who actually did fall asleep under a yew tree. One must assume that she had lain on either fallen yew needles or that during the night that the leaves fell onto her skin. She woke covered in a terrible skin rash. She then went into a coma and died on the fourteenth day! Harmand also tells of the bark of a yew tree near his home, which had been chopped down and thrown into a small artificial waterway. Fish in the canal died in great quantities; cats refused to eat these fish, but some of the servants *who were bold enough to cook and eat a few of them, paid the penalty of their rashness in the shape of a severe choleraic attack.*^{liii} It would seem therefore that both the bark and the leaves of the tree are toxic. Pliny, the Roman naturalist had even implicated the wood, citing it as the original poisoned chalice; he states that *drinking cups made from this tree were found to impart a deadly property to the wines drunk out of them.*^{liv}

THE LEPEROUS DISTILMENT



Fig. 10. Hamlet watches his guilty uncle Claudius as the poisoning is re-enacted.

I think the best evidence for the identity of the cursed Hebenon, as Yew is the way in which Taxine works. As we have said, Shakespeare was always painstaking in getting his medical details correct and in *Hamlet* he wanted a poison which would kill quickly and simulate the effects of a snakebite so that the coroner would have no suspicions at all of

regicide. One detail, which we have not yet considered, provides a strong clue to the identity of Hebenon. The Ghost told his son of a poison

*...whose effect
Holds such an enmity with
the blood of man
That swift as quicksilver it
courses through
The natural gates and alleys
of the body
And with a sudden vigour it
doth posset 68
And curd, like eager drop-
pings into milk,
The thin and wholesome
blood: so it did mine,
And a most instant tetter
barked about,
Most lazar-like with vile and
loathesome crust
All my smooth body.*^{lv}

(Perhaps a gloss is needed here: *tetter* used to mean *skin lesion* or *rash*; the name *lazar* was used for a *leper*.) So here we have two specific

effects of the cursed hebona: firstly, it curds the blood and secondly and perhaps far more interestingly, it causes a leprosy-like rash. The Belgian maid described by Harmand had a severe skin rash.

The best account of the extreme toxic nature of the yew is a 75 page French book

written in the early 19th century. This was written in response to a spate of deaths of young women occurring around that time throughout France because of Yew being used as an effective abortifacient. Three eminent toxicologists, Chevallier, Duschesne and Reynal, were commissioned by the government to inquire into and report upon the nature and the properties of the yew, with particular reference to its effects as a poison. They wrote:

There is another very singular phenomenon, which no previous author seems to have pointed out as being a characteristic symptom of yew poisoning. We allude to those remarkable eruptions on the skin, which take place in the human subject. ... This pathological characteristic however is so extremely important that we feel bound to draw attention to it, for the guidance of those who might hereafter be engaged in observations in similar cases.^{lvi}

Yew was known to mediaeval malingerers who would evidently rub yew leaves on their skin to give a ghastly rash and if they survived, then go begging as a leper. (Bauhin writes of impostors *Qui morbos simulat pulvere Taxi adeo cuti ulcerant, ut miserabiles ac fere deplorati hominess appareant.*)^{lvii}

The serpent that did sting thy father's life

As I have said, Shakespeare always tried to get his medical details meticulously right, and the question of the snakebite has not yet been considered. The ghost has said,

*Now, Hamlet, hear;
'Tis given out that, Sleeping in my orchard,
A serpent stung me;
So the whole ear of Denmark
Is by a forged (ie false) process of my death
Rankly abused;*^{lviii}

The only snake extant in Denmark (or perhaps more significantly in Britain) was the viper or adder (*Vipera berus*). Snakebites do give a spreading skin rash. This was known as long ago as Dioscorides who wrote about adder bites:

An ulceration of the skin follows which not only affects the surface but spreads beneath it. The person becomes comatose.^{lix}

It is also interesting to add as a last thought on the analogy between venomous snakes and yew poisoning the advice given by the Emperor Claudius. Suetonius^{lx} tells us that the Emperor issued an edict suggesting:

Nothing better for Adder bites than the juice of the Yew tree.

(What he actually says is *nihil æque facere ad viperæ morsum quam taxi arboris succus*.) It appears that this was an early-recorded example of the homeopathic principle of *like curing like* (*similia similibus curantur*). There was evidently also a folk remedy in Silesia for the bites of rabid dogs, which involved a decoction of yew wood in milk.

It has been shown in the preceding paragraphs that it is certainly feasible to kill a sleeping person by pouring poison into his ear. Shakespeare was an absolute stickler for detail. He was particularly fond of getting his medical details right; he probably knew that this gave his plays realism. The poison in *Hamlet* could have been one of a number of herbal infusions readily available at the turn of the 17th century and because of the side effect of skin lesions, the writer has argued strongly in favour of that poison being taxine from the ubiquitous yew tree.

One important question remains however, and that is *why* did Shakespeare choose this peculiar method? It has been suggested by literary critics that it was in fact a metaphor! It was symbolic that evil can and does go in through the ear. We must remember that Shakespeare's childhood was during a time in this country when bitter religious divisions existed between Romanists and Protestants. His own father, John Shakespeare was a Papist who was involved in religious political intrigue. These were days when it was believed that sufficient evil (in the form of religious heresy) could enter into one's ear not only to damage one's physical health, but also to eternally contaminate one's immortal soul. Thus, evil going into the ear might be a metaphor.

I think there were a number of reasons why this particular method of introducing poison is employed. Shakespeare was a great entrepreneur. He knew what his “public” wanted and poisoning stories were fashionable. Shakespeare had not yet written one. He often borrowed an old plot and then “sexed it up” with his own inimitable brand of dramatic poetry. In this case, the story of *Hamlet* was based on the Danish story of King Amleth, which was available at that time in *The History of the Danes* collated by Saxo Grammaticus in 1216.^{lx} In this original version, however Amleth the king was stabbed. This however would not have had half the dramatic impact as an ear poisoning; stabbings were commonplace after all. Much more significantly, it would not have moved the plot on so well and a stabbing would have been far less likely to catch the conscience of the king (Claudius). Seeing a play in which his unusual and ingenious method of regicide was reiterated was really designed to rattle him. Moreover, of course it did!

Shakespeare might well have got his idea from the story of the sickly young French King Francois and the outrageous indictment of Ambroise Paré. It might well still have been in the public’s memory (a modern analogy perhaps being the ricin poisoned umbrella tip used to kill the Bulgarian dissident, Georgi at a London bus stop in the 1980s) Alternatively, he might have heard from his son-in-law, who was the Stratford GP, about the recent anatomical description of the pharyngo-tympanic tube by Eustachio. Chronic perforations of the ear would doubtless have been common in pre-antibiotic Tudor England, and poison poured into the ear would then run straight into the throat. There was also a mediaeval belief that the ear led directly to the brain. To members of an Elizabethan audience who still believed this it would certainly have facilitated any attempt at poisoning by this method. We will never know.

I believe that Shakespeare wanted to have a poisoning play. The case of the French king was still in his and his public’s mind and he realized that poisoning via the ear could, of course, be used as a brilliant dramatic device. I further believe that he chose taxine from the yew tree as his poison and let us know all about its strange side effect. I think

that he cared passionately about getting all his details, including his medical details, right and I think that the murder of *Hamlet’s* father is further evidence of his amazing encyclopaedic knowledge of contemporary medicine.

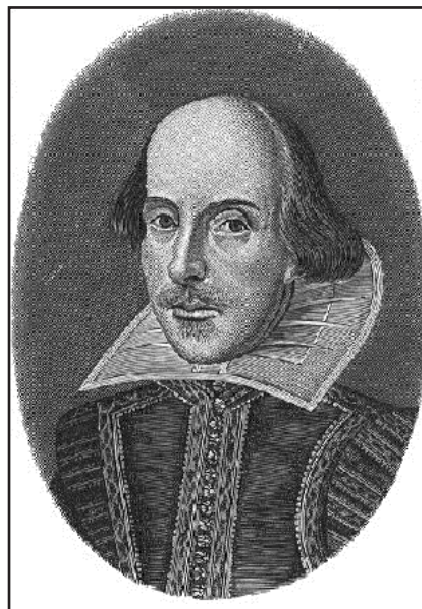


Fig.11. William Shakespeare. (1564 – 1616)

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