

A Study of Medical Allusions in Four of Shakespeare's Tragedies

Eiko Kawagoe

Kobe City College of Nursing

Abstract

I examined all the words in 20 word areas concerning sickness and medicine in A Shakespeare Thesaurus. I have identified a total of 3,061 words in such word areas. In particular, I focused on the words in the word area, 'medicine•cure,' which is thought to clarify Shakespeare's medical knowledge. The average number of 'medicine•cure' in the four major tragedies is larger than any other genre. Thus, in this paper I discussed all the words in 'medicine•cure' appearing in the four tragedies.

All of the four tragedies are rich in medical references, and we can see some therapies, medicines, medical instruments of Shakespeare's time. Some of them are unique to those days, while others are still used today. One example unique to those days and found in Macbeth is 'Royal Touch,' which kings of England and France performed for 'scrofulous persons' in the period. Some examples of remedies we still use nowadays are rest, music and herbal therapy, which are found in King Lear and Othello.

These medical words are sometimes used paradoxically or symbolically in the context of each play. Some of them are used rather ironically to denote the things which cannot cure people. Shakespeare may infer some of the true nature of medicine through these medical words.

The number of words I have discussed is limited, but this study has clarified some characteristics of Shakespeare's medical terms. I hope it will be a fruitful first step toward a complete study of all the medical terms in Shakespeare's works.

Introduction

In the Shakespeare's time, a number of diseases prevailed in England. In particular, the England of Shakespeare was well acquainted with the scourge of contagious diseases. London was rarely free from bubonic plague, and there were serious outbreaks of the disease in 1582 and 1603. A lot of people were afflicted with gout, and the elderly suffered from chronic nasopharyngeal and tracheal catarrh, as mentioned in Othello. (III. iv. 47) These are only a few examples, but many kinds of diseases prevailed in this period.

Medical professionals did exist to cure these various kinds of disease at that time. The literary stereotypes of such medical professions fall into three categories, as did the practitioners themselves. These were physicians, who at one point in their history were forbidden to shed

blood; the surgeons, who were allowed to shed any quantity of it; and the apothecaries, chiefly concerned with medicines. Besides these professionals, common people knew of many of folk remedies.

Shakespeare fully recognized the value of medicine and pertinent references are numerous. Medical commentators have, for the most part, merely listed the references to medicine found in Shakespeare's plays and accepted them as evidence of the poet's medical learning. All commentators concede to Shakespeare an extensive knowledge of the healing art. All critics agree that Shakespeare was familiar with the medical folklore of the times. Few of them deny that he was acquainted with the principles and theories of the medical writers of the past and of his own time.

Methods

Though critics have listed many medical references that appear in Shakespeare's works, none has both identified and carried out a thorough analysis of them. I have ventured to study all such references and investigated the characteristics of each both by genre and work. In this paper, I take a look at 20 sub word-areas concerning sickness and medicine in the word area 'health•medicine' as found in A Shakespeare Thesaurus. I have counted the number of words in these word areas, both in each play and then in each genre of Shakespeare's works; comedies, tragedies, romance plays, historical plays and poems. In particular, I have focused on all the words in one of the sub word-areas, 'medicine•cure.' This subword-area in particular is thought to include words that exemplify Shakespeare's medical knowledge. I have added a sub genre, four tragedies, to the genres above, as these four plays seem to have a close relation with the concept of medicine and cure. I then examine a genre of his works which contains the largest number of words in 'medicine•cure.' I study this genre in depth as the genre is thought to be the richest in Shakespeare's medical thought, and this is an appropriate place to begin the study of Shakespearean medical references.

Results and Discussion

The number of words in each sub-word area appearing in each play and the total number of words in each play appear in Table 1. In Table 2, I have identified a total of 3,061 words in the word areas concerning sickness and medicine. The total number of words appearing in each genre is shown in Table 2. As for the average number of words, historical plays have the largest number, and tragedies the second largest number.

Table 3 shows the number of words appearing in the sub word area, 'medicine•cure.' Of the five genres, romance plays have the largest average number of such words and poems the second largest number. However, with an average of 15.5 per play, the average number of words in the four major tragedies, Hamlet, King Lear, Macbeth and Othello is larger than any other genre.

In this paper, I investigate all the medical words of the four tragedies taken from A Shakespeare Thesaurus and examine the characteristics of these words as the first step in my study 'Shakespeare and his medical words,' as this genre is thought to be the richest in Shakespeare's medical thought. I will study each tragedy one by one in context. The words I have selected from A Shakespeare Thesaurus, are underlined and in bold face.

1) Hamlet

The following words, 'cataplasm,' 'simple' and 'unction' demonstrate the medicine of those times:

Laer. :

And for that purpose, I'll anoint my sword.
I bought an unction of a mountebank
So mortal that but dip a knife in it,
Where it draws blood, no cataplasm so rare,
Collected from all simples that have virtue
Under the moon, can save the thing from death
That is but scratch'd withal. I'll touch my point
With this contagion, that if I gall him slightly,
It may be death. (Ham IV. vii. 139-147)

Ham. :

Mother, for love of grace,
Lay not a flattering unction to your soul,
That not your trespass but my madness

Table 1 Number of Words in Each Play in 20 Word Areas

	Ado	All's	Ant	As	Caes	Cor	Cymb	Err	Gent	H4	H5	H6	H8	Hml	John	LLL	Lr
GENRE	C	C	T	C	T	T	R	C	C	H	H	H	H	T	H	C	T
decay	10	12	23	9	10	21	13	14	4	32	13	50	10	29	13	5	23
sickness	13	14	12	6	18	11	18	6	5	52	18	16	18	23	17	11	17
plague	1	3	3	0	0	5	0	0	1	15	1	3	2	3	1	1	4
fit	0	1	0	1	3	1	0	3	0	5	0	1	0	4	2	0	1
fever	0	0	1	1	2	2	1	1	0	3	2	0	1	1	3	2	0
gout	0	1	1	1	0	2	1	0	0	5	0	1	0	0	0	0	0
leprosy	0	0	1	0	0	0	0	0	0	0	2	1	0	2	0	0	0
rheum	3	0	1	0	1	1	1	2	1	4	2	0	0	2	3	0	2
pox	0	4	0	0	0	0	1	0	1	6	3	2	0	2	0	2	0
queasiness	2	0	5	6	2	2	3	2	0	6	3	6	0	3	2	2	2
itch	1	0	0	0	1	2	0	0	0	0	0	0	0	1	0	0	0
sore	1	3	2	1	0	5	0	1	0	6	8	0	0	6	1	2	8
ache	13	3	8	5	0	6	11	6	6	10	4	17	15	6	5	13	5
wound	12	12	16	18	3	23	12	6	6	19	9	19	6	14	15	8	12
glanders	0	0	0	0	0	1	0	0	0	1	0	0	2	0	0	0	0
madness	3	1	1	4	2	0	6	24	1	4	0	11	3	10	2	4	14
cripple	3	0	1	5	0	3	3	1	2	5	2	10	3	2	3	2	2
physician	0	11	1	1	2	3	4	2	1	9	1	5	1	2	0	2	3
hospital	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	1	2
medicine • cure	8	26	8	11	3	16	15	6	9	27	5	16	11	16	8	10	12
Total	70	91	84	69	47	104	89	74	37	209	75	159	72	126	75	65	107

Lucr	Mcb	Meas	Merch	Mids	Oth	Per	R2	R3	Rom	Shr	Sonn	Tim	Tit	Tp	Troil	Tw	Ven	Win	Wiv
P	T	C	C	C	T	R	H	H	T	C	P	T	T	R	C	C	P	R	C
28	11	8	11	4	9	9	20	15	21	12	39	19	12	6	27	2	15	11	12
7	17	5	6	8	3	5	14	12	13	5	16	21	1	6	13	10	7	18	8
0	0	0	0	0	5	1	2	1	3	0	1	8	0	3	7	5	2	0	0
2	3	0	0	0	2	0	1	0	0	0	0	0	4	8	0	0	0	1	0
0	2	3	1	0	0	0	1	0	0	0	1	3	0	3	2	0	3	0	0
1	1	3	1	0	0	1	1	0	1	0	0	2	0	1	6	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	2	0	0	0	0
0	0	1	1	1	1	0	1	0	0	2	0	2	0	0	4	0	1	1	1
0	1	4	0	2	1	2	0	0	1	0	0	1	0	3	2	1	0	0	0
3	0	1	2	5	2	0	0	2	5	2	0	1	3	1	4	0	0	1	0
0	0	1	0	0	1	0	0	0	1	0	0	1	0	1	4	0	0	0	1
1	4	2	0	0	5	0	2	1	5	0	0	4	0	6	12	2	1	2	9
14	3	6	1	2	11	6	6	7	8	1	7	11	3	13	11	8	4	2	4
17	10	8	5	12	13	12	6	14	14	6	8	8	10	9	17	11	13	5	2
0	0	0	0	1	0	1	0	0	0	9	0	0	0	1	1	0	0	0	0
4	3	6	3	6	2	7	3	1	8	16	7	3	11	6	8	25	3	5	8
3	0	0	2	0	5	1	2	9	4	5	5	6	0	3	1	1	0	3	0
1	6	0	1	1	6	6	4	1	5	2	2	3	2	1	4	2	0	1	17
0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
11	16	9	3	4	18	16	4	5	20	2	20	10	6	8	12	3	7	14	8
92	77	57	37	46	84	67	67	68	109	62	106	108	52	79	137	70	56	64	70

Genre : C ; Comedies, T ; Tragedies, R ; Romance plays, H ; Historic plays, P ; Poems

speaks.

(Ham. III. iv. 146-51)

It will but skin and film the ulcerous place,

Whiles rank corruption, mining all within,

Infects unseen. Confess yourself to heaven,

According to The Oxford English Dictionary on Compact Disc, the word 'cataplast' was

Table 2 Number of words appearing in each genre in the 20 word areas

	Total number of words	Number of plays	Average number of words
Comedies	885	13	68.1
Tragedies	898	10	89.8
Romance plays	299	4	74.8
Historical plays	725	7	103.6
Poems	254	3	84.7
Total	3061	37	82.7

used in a medical sense from 1563 to 1866, 'simple' from 1389 to 1899, and 'unction' from 1382 to 1877. These medical terms are thought to have been used during these times by the general public. Stearns discusses these words :

How Shakespeare may have acquired his medical knowledge it is, of course, impossible to conjecture. But it is likely that he never received a regular medical education. Since, if he had, and, being a gentleman and the 'creator of polished gentlemen like Hamlet,' his instinctive good taste in composition would have rarely permitted him to make use of terms and comparisons borrowed from the shop. (76)

The medicines above, however, cannot help people in the long run in Hamlet. And the following medical words, 'medicine,' 'cure,' 'help,' 'physic' and 'purgation' are used as things or actions which cannot help Hamlet ('medicine') or King Claudius ('cure,' 'physic,' 'purgation') harlot's cheek ('help') respectively, rather 'physic' prolongs Claudius' sickly days, and Claudius' 'purgation' would plunge him into far more choler :

Laer. :

It is here, Hamlet. Hamlet, thou art slain.
No medicine in the world can do thee good ;
(Ham. V. ii. 319, 20)

Table 3 Number of words appearing in each genre in the word area 'medicine•cure'

	Total number of words	Number of plays	Average number of words
Comedies	111	13	8.5
Tragedies	125	10	12.5
Romance plays	53	4	13.3
Historical plays	76	7	10.9
Poems	38	3	12.7
Total	403	37	10.9
4 tragedies	62	4	15.5

King. :

For like the hectic in my blood he rages,
And thou must cure me. Till I know 'tis done,
Howe'er my haps, my joys were ne'er begun. (Ham. IV. iii. 69-71)

King. :

How smart a lash that speech doth give my conscience,
The harlot's cheek, beautied with plast 'ring art,
Is not more ugly to the thing that helps it
Than is my deed to my most painted word.
O heavy burden ! (Ham. III. i. 50-54)

Ham. :

This physic but prolongs thy sickly days.
(Ham. III. iii. 96)

Ham. :

Your wisdom should show itself more richer to
signify this to his doctor, for for me to put him to
his purgation would perhaps plunge him into more choler.
(Ham. III. ii. 296-99)

The following word 'appliance,' which is used symbolically, cannot help Hamlet, either.

King. :

Deliberate pause. Diseases desperate grown
By desperate appliance are reliev'd,
Or not at all. (Ham. IV. iii. 9-11)

King Claudius uses the expression 'diseases desperate grown' to mean Hamlet going insane. To relieve this disease, he needs 'desperate appliance.' 'Appliance' meaning 'cure, medicament' is used symbolically to denote Claudius' plan to deport Hamlet. However, it is not a cure for Hamlet at all.

We can see the allusion to diagnosis in the following passage :

Ham. :

With most miraculous organ. I'll have these
players
Play something like the murder of my father
Before mine uncle. I'll observe his looks ;
I'll tent him to the quick. If a do blench,
I know my course. The spirit that I have
seen (Ham. II. ii. 590-94)

Hamlet refers to the tent used as a probe, as if he would thrust it into the sensitive part of a wound.

The following words, 'drug,' 'mixture,' 'po-tion' and 'unction,' are used as poisons in the contexts below :

Luc. :

Thoughts black, hands apt, drugs fit, and
time agreeing, (Ham. III. ii. 249)

Luc. :

Thou mixture rank, of midnight weeds
collected,
With Hecate's ban thrice blasted, thrice
infected,
Thy natural magic and dire property
On wholesome life usurps immediately.
(Ham. III. ii. 251-54)

Ham. :

Here, thou incestuous, murd'rous, damned
Dane,

Drink off this potion. Is thy union here?
(Ham. V. ii. 330, 31)

Laertes :

And for that purpose I'll anoint my sword.
I bought an unction of a mountebank
So mortal that but dip a knife in it,
(Ham IV. vii. 139-41)

As for 'mixture,' Bucknill admits "In the players' representation of the murder, the poi-son which has these effects, impossible to any natural substance, is represented to be a com-pound, endued with its virus by the ceremonial of witchcraft." (260-61)

Only Ophelia uses the words for healing, praying for Hamlet's healing and the Queen's cure :

Oph. :

Heavenly powers, restore him.
(Ham. III. i. 143)

Oph. :

There's fennel for you, and columbines.
There's
rue for you. And here's some for me. We
may call it
herb of grace a Sundays. You must wear
your rue (Ham. IV. v. 178-80)

As we have seen, the other words in the word area 'medicine' in Hamlet are used not as what can heal the characters in this play, but rather worsen their situations. Only words used by Ophelia can give relief.

In Hamlet we can see some medical terms used by ordinary people during Shakespeare's time. We may infer from some of these words that Shakespeare never received a regular medical education. Most of the words, howev-

er, are used paradoxically. They are not medicines at all, rather poisons. They cannot cure the people in this play. Only Ophelia mentions words which could be of relief - an interesting point to note. The medical words used by characters other than Ophelia in Hamlet are not medicines at all, while Ophelia's words can be regarded some sort of medicine. Only Ophelia, the purest form of beauty and innocence, is able to heal people. Shakespeare may be alluding to the nature of medicine through these medical words in Hamlet.

2) King Lear

The following passages including the words in A Shakespeare Thesaurus show us effective ways to cure people in the Shakespearean era.

Kent (to Lear) :

Oppressed nature sleeps.
This rest might yet have balm'd thy broken sinews
Which, if convenience will not allow,
Stand in hard cure. (Lr. III. vi. 95-98)

Kent suggests 'rest' should be an effective remedy.

Cor. :

Cure this great breach in his abused nature !
Th'untun'd and jarring senses, O, wind up
Of this child-changed father.

Doct. :

So please your Majesty
That we may wake the King? he hath slept
long.

Cor. :

Be govern'd by your knowledge, and proceed
I' th' sway of your own will.
(Lr. IV. vii. 15-20)

Doct. :

Be by, good Madam, when we do awake

him ;

I doubt not of his temperance.

Cor. :

Very well.

Doct. :

Please you, draw near. Louder the music
there!

Cor. :

O my dear father ! Restoration hang
Thy medicine on my lips, and let this kiss
Repair those violent harms that my two sisters
Have in thy reverence made !
(Lr. IV. vii. 23-29)

The physician advocates rest and expects improvements when the king is awakened from his sleep by the sound of music. He tries to restore the king for a moment to sanity by the recognized therapy of rest and music, demonstrating that music therapy was known in Shakespeare's time.

Cor. :

What can man's wisdom
In the restoring his bereaved sense?
He that helps him take all my outward
worth

Doct. :

There is means, Madam ;
Our foster-nurse of nature is repose,
The which he lacks ; that to provoke in him,
Are many simples operative, whose power
Will close the eye of anguish.

Cor. :

All bless'd secrets
All you unpublish'd virtues of the earth
Spring with my tears ! be aidant and
remediate
In the good man's distress ! Seek, seek for
him, (Lr. IV. iv. 8-18)

The physician has interesting comments to

make on the deteriorating mental state of Lear. 'Repose' and 'simples' (medical herbs) can restore the king's senses. Herbal therapy was also one of the major medical practices during the Renaissance period. The doctor's comments above show another recognized therapy of that period.

The following words 'physic' and 'untented' ironically suggest Lear's incurable wounds :

Lear :

How shall your houseless heads and unfed sides,

Your loop'd and window'd raggedness, defend you

From seasons such as these? O! I have ta'en
Too little care of this. Take physic, Pomp;
Expose thyself to feel what wretches feel,
That thou mayst shake the superflux to them,

And show the Heavens more just.

(Lr. III. iv 30-36)

Discoll states, "Lear's struggle to retain personal dignity makes him realize that he has shown too little concern for the dignity of others, too little compassion for the pains wretches must endure, and too little interest in social justice" (178)

This 'physic' is for Lear himself. The crisis makes him notice his own arrogance and realize the cure is to discard such arrogance.

Lear :

Th' untented woundings of a father's curse
Pierce every sense about thee! Old fond eyes,

Bewep this cause again, I'll pluck ye out,
And cast you, with the waters that you loose,

To temper clay. Yea, is't come to this?

(Lr. I. iv 298-302)

'The untented woundings' pierce Goneril's

every sense. Lear's grudge against Goneril is an unbearable one, and his woundings are 'untented' (incurable). This word 'untented' appearing in Act One implies the choler will change to a senile melancholy and through physical and mental stress to madness and no alleviation will be possible.

In the following passage, 'medicine' means 'poison' :

Reag. :

Sick! O sick!

Gon. :

If not, I'll ne'er trust medicine.

(Lr. V. iii 96,97)

Stearns discusses, "The tragic muse is represented as holding a dagger in one hand, and the poisoned chalices in the other. Considering what a convenient thing poison is, for a dramatic poet to resort to, to bring about his catastrophe, Shakespeare must be allowed to have made sparing use of it." (68)

As we have seen, in King Lear some therapies of the Elizabethan time appear; rest, music and herbal therapy and such therapies are introduced by a humane and wise doctor who plays the traditional role of physician-philosopher. The therapies, however, are too late to change the outcome. They are only the relief before the catastrophe. Lear himself realizes his own case is incurable, which is expressed in rather ironical ways, and he knows the effective cure is not the recognized therapies of that time but to discard arrogance.

3) Macbeth

In Macbeth we can find the special remedy of Royal Touch in the following passage :

Doct. :

Aye, Sir ; there are a crew of wretched souls,
That stay his cure : their malady convinces
The great assay of art, but at his touch,
Such sanctity hath Heaven given his hand,
They presently amend. (Mac. IV.iii.141-45)

The English doctor in Macbeth believes in 'touching,' a kind of quackery, which was one of the most popular medical practices in the Renaissance period. Moreover, 'Royal Touch,' which was granted to the Kings of Great Britain and France by the blessing of God, is mentioned. This is the power of curing the King's Evil; scrofulous persons were believed to recover if kings 'touch' their faces, necks or hands etc. Stearns argues, "The reader will remember that this practice, for scrofulous persons to be touched by the sovereign, continued in England as late as Queen Ann's reign, in Doctor Johnson's young days." (34)

The 'Royal Touch' was inherited from generation to generation as we can see in the following passage :

Mal. :

To the succeeding royalty he leaves
The healing benediction. With this strange virtue,
He hath a heavenly gift of prophecy ;
And sundry blessings hang about his throne,
That speak him full of grace.
(Mac. IV.iii.155-59)

As Poynter mentions, "It is believed that the detailed account of the healing ceremony which occurs in the passage above was introduced as a tribute to James I, before whom the play was acted." (164)

In the following, we can see a mention of urinoscopy.

Macb. :

Come, sir, despatch. - If thou couldst,
Doctor, cast
The water of my land, find her disease,
And purge it to a sound and pristine health,
I would applaud thee to the verb echo,
That should applaud again. - Pull't off, I say. -
What rhubarb, cyme, or what purgative
drug,
Would scour these English hence? - Hear'st thou of them?
(Mcb. V.iii.50-56)

As for this passage, Backnill says, "The doctor is called upon first to diagnose the disease of the body politic, in the manner which, as we have seen, was then common among physicians." (199-200)

Poynter argues further :

In the older medical works there are often elaborate charts where all the colours of the urine are arranged in a circle or table according to the offending humour or combination of humours which have brought about the disease - a kind of diagnostic read-reckoner. The inspection of urine for diagnosis by this method was known as urinoscopy, and the physician was said to 'cast the patients' water.' The analogy with casting a horoscope is obvious." (155,6)

Shakespeare seems to have a poor opinion of doctors. The following passage proves this :

Doct. :

Therein the patient
Must minister to himself.

Macb. :

Throw physic to the dogs ; I'll none of it. -
(Mcb. V. iii. 45-47)

Draper argues :

Lady Macbeth's Doctor seems to be concerned with politics in a more personal way. Though she suffers from a recognized disease, he dismisses her as "beyond my practice," says that she is not sick but "troubled with thick-coming fancies," and declares that such a one "must minister to himself! Perhaps the Queen's misdeeds had made her illness progress beyond all hope of medicine ; but, at the end of the scene, the Doctor's aside shows him more interested in saving his own neck in the current civil war than in saving his patient." (318)

Kail states, "This is perhaps not so much a reflection of his contempt of medicine, as of his impatience at the doctor who stands irresolute and stubborn, when Macbeth is all for action." (26)

The other medical terms appearing in Macbeth are as follows :

Macb. :

Canst thou not minister to a mind diseas'd,
Pluck from the memory a rooted sorrow,
Raze out the written troubles of the brain,
And with some sweet oblivious antidote
Cleanse the stuff'd bosom of that perilous
stuff
Which weighs upon the heart?
(Mac. V. iii. 40-45)

Concerned at his wife's deteriorating mental illness, Macbeth asks his physician.

Lady M. :

The doors are open, and the surfeited
grooms
Do mock their charge with snores : I have
drugg'd their possets,
That Death and Nature do contend about
them,
Whether they live, or die. (Mac. II. ii. 5-8)

Lady Macbeth does not trust the fumes of wine to stupefy the overfed grooms, since she administers to them some narcotic, to an extent dangerous, but not fatal.

Cap. :

But I am faint, by gashes cry for help.
(Mcb. I. ii. 43)

'Help' means cure.

Mal. :

Let's make us med'cines of our great
revenge,
To cure this deadly grief.
(Mcb. IV. iii. 214,15)

The word 'medicine' is used metaphorically here.

Malcolm in a medical term of phrase suggests revenge to comfort Macduff's grief.

3 Witch. :

Scale of dragon, tooth of wolf ;
Witches' mummy; maw, and gulf,
Of the ravin'd salt-sea shark ;
(Mcb. IV. i. 22-24)

'Mummy' is a preparation for magical purposes, made from dead bodies.

Cath. :

Meet we the med'cine of the sickly weal;
And with him pour we, in our country's
purge,
Each drop of us. (Mcb. V. ii. 27-29)

One of Macbeth's opponents expresses the same thought in the same form, namely, that the common-wealth is sick, and requires purgation.

Macb. :

The labour we delight in physics pain.

This is the door. (Mcb. II.iii. 49, 50)

'Physic' in the passage above means 'a remedy for a disease.'

In Macbeth, we can find the remedy of 'Royal Touch' which kings of England and France performed for 'scrofulous persons' in the period from 13th to 18th century. And we can also see mention of urinoscopy to inspect the combination of humors in the older medical works. After diagnosing with urinoscopy, the doctor is required to 'purge' the diseased patient to sound health. In this drama Shakespeare's opinion of doctors can also be seen, and this is an unfavorable one. In spite of that, some other medical terms are found here. Thus Macbeth is rich in references to the medical practices of the Elizabethan period.

4) Othello

In Othello we can also find remedies or medical instruments of those days :

Oth. :

Come, Desdemona : 'tis the soldier's life,
To have their balmy slumbers wak'd with
strife. (Oth II. iii. 249, 50)

'Balmy' meaning 'full of medicinal power' modifies 'slumbers.' This suggests that slumber should be regarded as an effective remedy. This idea is mentioned by Kent and the physician in King Lear as discussed earlier.

Iago :

...yet againe, your fin-
gers to your lips? would they were clyster-
pipes for
your sake... (Oth. II. i. 175-77)

'Clyster-pipe,' meaning 'a tube or pipe for administering clysters.' is a medical instrument of those days. The word, 'clister-pipe'

was first used by Shakespeare and the last example used was in 1882 according to The Oxford English Dictionary on Compact Disc. This instrument is thought to have been used during this period.

Iago :

The food that to him now is as luscious as
locusts,
shall be to him shortly as bitter as the
coloquintida.
(Oth. I. iii. 349, 50)

Bucknill states, "Iago's argument, that Othello will become weary and disgusted with his bride, is illustrated by a medical simile. She is to him, at present, as luscious as locusts... When wearied of her she will disgust his taste like coloquintida." (271) From the fruit of coloquintida is obtained the well-known bitter and purgative drug, colocynth.

The following words, 'drug,' 'mineral,' 'medicine' and 'mixture' are used as medicinal substance or poison. They all appear to charm Desdemona's mind.

Bucknill argues this point :

Desdemona's father, unable to give credence to her love for a middle-aged man of colour on any other supposition, attributes it to the use of charms, love-philtres, or aphrodisiac drugs, the belief of the power of which was common in Shakespeare's time, and is said to be still prevalent throughout the south of Europe.

Falstaff's kissing-comfits and eryngoes belong to the same category." (269)

Bra. :

That thou has practis'd on her with foul
charms,
Abused her delicate youth, with drugs or
minerals,
That weakens motion : I'll have 't disputed

on ;

'Tis probable, and palpable to thinking.
I therefore apprehend and do attach thee
For an abuser of the world, a practiser
Of arts inhibited, and out of warrant ;
(Oth. I. ii. 73-79)

Oth. :

I will a round unvarnish'd tale deliver,
Of my whole course of love, what drugs,
what charms,
What conjuration, and what mighty magic,
(Oth. I. iii. 90-92)

Bra. :

She is abus'd, stol'n from me and corrupted,
By spells and medicines ' bought of
mountebanks,
For nature so preposterously to err,
Being not deficient, blind, or lame of sense,
Sans witchcraft could not.
(Oth. I. iii. 60-64)

Bra. :

That with some mixtures powerful o'er the
blood,
Or with some dram conjur'd to this effect,
He wrought upon her. (Oth. I. iii. 104-106)

Oth. :

Drops tears as fast as the Arabian trees
Their medicinable gum; set you down this,
(Oth. V. ii. 351, 52)

Othello compares the tears, which flow in his
dread remorse, to the gum of Arabia;
probably myrrh, not gum arabic, is meant.

Iago :

Work on,
My medicine works: thus credulous fools are
caught,
And many worthy and chaste dames even
thus

All guiltless, meet reproach. What ho, my
lord,

My lord, I say! Othello! (Oth. IV.i. 45-48)

As mentioned in Shakespeare for Students,
"The principal topic of Othello is the terrible
destructiveness of jealousy." (413) The follow-
ing two passages by Iago and one by Othello
are closely connected with this main theme of
the play. 'Jealousy' is just like the 'poison-
ous mineral' and shall never 'medicine'
Othello to the sweet sleep even with the aid of
all the 'drowsy syrups' of the world.

Iago :

Look where he comes, not poppy, nor man
dragora,
Nor all the drowsy syrups of the world,
Shall ever medicine thee to that sweet sleep
Which thou owedst yesterday.
(Oth. III. iii. 335-38)

Bucknill discusses :

The devilish philosophy of Iago can find no
better illustration than slow poison for the
fatal mischief he has effected on his
master's peace of mind. If jealousy, like a
poisonous mineral, gnawed his own vitals,
that which he has instilled into the Moor, is
a slow poison, not, indeed, felt at first, but
acting by degrees on the blood." The most
powerful narcotics known, neither poppy,
nor mandragora, shall medicine Othello to
that sweet sleep. (272)

Iago :

Hath leap'd into my seat, the thought
whereof
Doth like a poisonous mineral gnaw my in
wards,
And nothing can, nor shall content my soul,
Till I am even with him, wife, for wife :
Or failing so, yet that I put the Moor,
At least, into a jealousy so strong,

(Oth. II. i. 291-96)

Bucknill also argues, "The motive of Iago's machinations is envy and jealousy, the last of which, he likens in its effect to a corrosive mineral poison." (272)

Oth. :

She's gone, I am abus'd, and my relief
Must be to loathe her : O curse of marriage,
That we can call these delicate creatures
ours,

And not their appetites! I had rather be a
toad, (Oth. III. iii. 271-74)

The jealous Othello's only 'relief' is to loathe Desdemona. This denotes his unbearable jealousy risen from deep love of his wife.

The direct cause of Othello's jealousy is the handkerchief, and it makes him sure of his wife's disloyalty. The special handkerchief was also dyed in 'mummy,' and 'conserves' of maidens' hearts.

Oth. :

'Tis true, there's magic in the web of it;
A sibyl that had number'd in the world
The sun to make two hundred compasses,
In her prophetic fury sew'd the work;
The worms were hallow'd that did breed the
silk,
And it was dyed in mummy, which the
skilful
Conserves of maidens' hearts.
(Oth III. iv. 67-73)

The other medical term, 'recover' is used in the contexts below :

Iago :

My lord is fall'n into an epilepsy,
This is his second fit ; he had one yesterday.

Cas. :

Rub him a bout the temples.

Iago :

No, forbear.

The lethargy must have his quiet course,
If not, he foams at mouth, and by and by
Breaks out to savage madness: look, he
stirs :

Do you withdraw yourself a little while,
He will recover straight; when he is gone,
I would on great occasion speak with you.

(Oth. IV. i. 50-58)

Othello's epileptic fit appeared when he was finally convinced of his wife's unfaithfulness. However, he soon recovers.

Cas. :

I remember a mass of things, but nothing
distinctly ;
a quarrel, but nothing wherefore. O God,
that men
should put an enemy in their mouths, to
steal away
their brains; That we should with joy, revel,
pleasance,
and applause, transform ourselves into
beasts!

Iago :

Why, but you are now well enough : how
came you
thus recovered? (Oth. II. iii. 280-86)

Cassio recovered from drunkenness.

As seen above, in Othello we can find remedies or medical instruments of those days; sleep, coloquintida and the clister-pipe. Moreover, coloquintida, a purgative drug is used as a medical simile. Some words are used as substances which charm Desdemona's mind and others are closely connected with the theme of the play, the terrible destructiveness of jealousy. This connection with the theme of the play is characteristic of Othello.

Conclusions

I examined all the words in 20 sub word areas concerning sickness and medicine in the main word area 'health•medicine' of A Shakespeare Thesaurus. I have identified a total of 3,061 words in the word areas. In particular, I focused on the words in the word area, 'medicine•cure,' which is thought to clarify Shakespeare's medical knowledge.

The average number of words appearing in 20 word areas, historical plays have the largest number, and tragedies the second largest number. As for the number of words appearing in the sub word area, 'medicine•cure,' romance plays have the largest average number of words and poems the second largest number in five genres. Furthermore, the average number of words in the four major tragedies, Hamlet, King Lear, Macbeth and Othello is larger than any other genre. The average number is 15.5 per play. In this paper I have therefore discussed all the words in 'medicine•cure' appearing in the four tragedies.

All of the four tragedies are rich in medical references. We can see some therapies, medicines, medical instruments of Shakespeare's time, as we have seen and discussed fully in each play. Some of them are unique to those days while others are still used today at the end of the 20th century. One example unique to those days and found in Macbeth is the 'Royal Touch' which kings of England and France performed for 'scrofulous persons' from the 13th to 18th century. Another example, which is also found in Macbeth is urinoscopy to inspect the combination of humors in the older medical tradition. Some examples of remedies we still use today are rest, music and herbal therapy, which are found in King Lear and Othello. It is interesting to note that music therapy, which is thought to be a rather new science, was known in Shakespeare's time.

These medical words are sometimes used paradoxically or symbolically in the context of each play. Some of them are used rather ironically to denote the things which cannot cure people. In Hamlet most of the words are not medicines, rather poisons. Only Ophelia, the purest form of beauty and innocence, mentions words which could be of relief. The therapies depicted in King Lear are too late to change the outcome. They are only the relief before the catastrophe. Lear comes to know that effective cures lies not in the recognized therapies of that time but in discarding arrogance. In Othello some words are used as substances which charm Desdemona's mind and others are closely connected with the theme of the play, the terrible destructiveness of jealousy. Shakespeare may infer some of the true nature of medicine through these medical words.

We can also see Shakespeare's opinion of doctors, which is an unfavorable one, when we see doctors in Macbeth. And, as we have seen in the words in Hamlet, it is likely that he never received a regular medical education.

Thus we have seen some of Shakespeare's attitude to medicine, cure and doctors in the four tragedies. The number of words we discussed is limited, but this study has clarified some characteristics of Shakespeare's medical terms. I hope it will be a fruitful first step toward a complete study of all the medical terms in Shakespeare's works.

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