

## SPECIAL ARTICLES.

## GYNÆCOLOGY AND TROPICAL DISEASES IN SHAKESPEARE.\*

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TWO YEARS ago I had the honour of speaking to this Society of the medical lore found in the Bible. To-night I am hoping to interest you in some aspects of medicine portrayed by Shakespeare.

I expect that most of you are aware that books have been written suggesting that the Bard of Avon was lawyer, soldier, courtier, gardener or astronomer, and yet, such was his genius, that I hope almost to persuade you that he was a doctor.

In the thirty-six plays mention is found of practically all the diseases and drugs known in this time, and in *Troilus and Cressida*, V. i., you will find a long list of such ills as the flesh was then heir to. But quite apart from such record, it is astounding to discover the wonderful knowledge of physiology, pathology, and psychology to which the plays bear witness. Let us acclaim him in his own words "How noble in reason, how infinite in faculty, in apprehension how like a god."

William Shakespeare was born on 23rd April, 1564, and died on the anniversary of his birth in 1618, that is twelve years before Harvey published to the world his momentous discovery of the circulation of the blood. But it should be remembered that for thirty years the poet was mixing constantly with the keenest brains of the realm, both in and out of London on his theatrical tours, and that that was the glorious Elizabethan age when merchant venturers, fired by the voyage of Hakluyt and "the new map with the augmentation of the Indies" (*Twelfth Night*) were seeking trade facilities with the distant West and East.

Surely then it needs but little imagination to picture the returning wanderers in the convivial company of Shakespeare and his play friends at the Mermaid, exchanging their tales of courts, courtesans and countries.

Those were the days of the Renaissance of Medicine as of Art, when such famous men as Fallopius, Vesalius, Fabricius, Columbus and Montanus had begun scientific dissection of the cadaver, and it is by no means improbable that Shakespeare heard of these men, or saw engravings of their discoveries in some London printing house with which he was in close touch throughout his life. Nor, in assessing his knowledge of medicine, must it be forgotten that his eldest daughter Susannah married Dr. John Hall in 1607, and that therefore some of his wealth of clinical observation may be attributed to this close association with one of the profession, although the greater number of his plays were written before that date.

In the thirty-six plays, seven regular physicians are mentioned but, be it noted, no surgeon, except it be that Dick Surgeon in *Twelfth Night*, who was so intoxicated that he could not attend his duties. You will remember the lines

"Didst see Dick Surgeon, sot?"

"Oh, he's drunk Sir Toby, an hour ago, his eyes, were set at eight in the morning. He's a rogue."

At that time, besides physicians licensed to practise by the College of Physicians or Company of Barber Surgeons, there were a host of quacks, both male and female, allowed by Act of Parliament in 1543 the liberty to practise, "if they had knowledge and experience of the nature of roots, herbs and waters, and of the operation of the same." As instances of these, you will remember Dr. Pinch in *The Comedy of Errors*, Friar Laurence in *Romeo and Juliet*, the female water

caster in *Twelfth Night*, Helena in *All's Well that Ends Well*. It is possible that Shakespeare also put Dr. Caius in *The Merry Wives of Windsor* in this category, for when the learned doctor boasts of his surgical skill and threatens to remove the testicles of Sir Hugh Evans for interfering with his love affairs, he is dubbed "belly stale," "a Castalian King Urinal" and "Monsieur Mockwater," though I must say I have a liking for that one small meed of praise he earns from the innkeeper,

"Shall I lose my doctor? No, he gives me the potions and the motions."

*Early Marriage.*

Before speaking of tropical medicine, it will perhaps be convenient to illustrate the poet's knowledge of gynecology.

In Elizabethan times, as in India to-day, early marriage was the rule rather than the exception, but it is obvious that the dangers thereof were recognised, for in *Romeo and Juliet*, I. iii., speaking of Juliet, Capulet says to Paris:—

"My child is yet a stranger in the world,  
She hath not seen the change of fourteen years,  
Let two more summers wither in their pride,  
Ere we may think her ripe to be a bride."

To which Paris replies:—

"Younger than she are happy mothers made" and Capulet retorts

"And too soon marred are those so early made." And in the next scene Lady Capulet says to Juliet:—

"We'll think of marriage now,  
Younger than you are made already mothers,  
By my count, I was your mother much upon these years,  
That you are now a maid."

*Quickenings.*

There are two references to this, one in *Love's Labour Lost*, V. ii.:—

"Faith, unless you play the honest Trojan, the poor wench is cast away, she's quick, the child brags in her belly already, she's yours."

And the other in *A Comedy of Errors*, I. i.:—

".....till my factor's death,  
Drew from me the kindly embracements of my spouse

From whom my absence was not six months old  
Before herself, almost fainting under the pleasing Punishment that women bear, became a joyful

Mother of two goodly sons,  
And which was strange, the one so like the other.  
As could not be distinguished but by name."

Obviously a case of uniovular twins.

*Longings of Pregnancy.*

The only mention of this condition that I can find is rather a quaint one in II. i.:—*Measure for Measure*,

"Sir, she came in great with child, and longing, save your honour's reverence, for stewed prunes. Sir, we had but two in the house, in a fruit dish, a dish of some three pence, your honours have seen such dishes, they are not China dishes, but very good dishes."

These lines would appear to indicate that regular traffic with the East was quite usual in 1608 when this play was written.

*Parity of Ages in Husband and Wife.*

In 1582 Shakespeare married Anne Hathaway who was eight years his senior. The marriage, judging by the bard's absences and his will, cannot be considered a happy one: you will remember that all he left her was his second best bed.

I think he nicely points the physiological moral of their disparity in ages in those lines in *Twelfth Night*, II. iv., which were written in 1600:—

"Too old by heaven. Let still the woman take  
An elder than herself, so wears she to him,  
So sways she level in her husband's heart.  
For boy, however we do praise ourselves,  
Our fancies are more giddy and infirm  
Than woman's are."

\* A paper read before the Medical Section of the Asiatic Society of Bengal on 20th January, 1930.

*Death of the Fœtus.*

Or its macerated retention *in utero*—probably due to syphilis—is put forward by *Henry VIII*, II. iv., as an excuse for his divorce from Katherine of Aragon:—

“Who hath commanded Nature that my lady’s  
womb,

If it conceived a male child by me, should  
Do no more offices of life to it than  
The grave does not to the dead; for her male issue  
E’re died ere they were made, or shortly after  
This world had aired them.”

And in *Henry VI*, Part 3, IV. iv., Queen Elizabeth bemoans the disastrous effect of acute emotion upon the child within her, in the lines:—

“Fair hope must hinder Life’s decay,  
And I the rather wean me from despair  
For love of Edward’s off’ring in my womb,  
This is it that makes me bridle passion,  
And bear with mildness my misfortune’s cross,  
Lest with my sighs or tears I blast or drown  
King Edward’s fruit, true heir to England’s crown.”

Of course I need not remind you that the idea of the infant being born as the poet says:—

“Full of unpleasing blots and sightless stains,  
Lame, foolish, crooked, swart, prodigious,

Patched with foul moles and eye offending marks”  
as a result of pre-natal influence, still holds to-day, though we are unaware of any scientific explanation.

*Premature Birth.*

That premature birth may occur from the rolling of a ship, will be of interest to many mothers proceeding home from India, for it is described in *Pericles*, III. i.:—

“.....Lucina, O  
Divinest patroness and midwife gentle,  
To those that cry by night, deliver thy deity  
Aboard our dancing boat, make swift the pangs  
Of my queen’s travails.”

And in *A Winter’s Tale*, II. ii., fear and grief at being cast into prison causes Queen Hermione to have a precipitate and premature labour:—

“How fares our gracious lady?”  
“As well as one so great and so forlorn  
May hold together, on her frights and grief,  
Which never tender lady hath borne greater,  
She is something before her time delivered.”

*Toxæmia of Pregnancy.*

Although the line I am going to quote was not written with reference to conception, it so beautifully gilds the picture of a woman pregnant, with anxiety and sickness, that I feel compelled to make use of it, for who in India has not seen the sallow icteric face of the unwilling mother. The line is from *Troilus and Cressida*, I. iii.:—

“What grief hath set the jaundice on your cheeks.”

*Labour.*

The references to difficult labour are interesting to us for as I pointed out in my former address, there are very few instances in the Bible of dystocia, and but of two deaths following confinement, the one from exhaustion and the other probably from inversion of the uterus or post-partum hæmorrhage. But as I then remarked, this absence of any record of difficult labour is what one would expect of primitive people living active, healthy, nomadic lives. Conditions were probably much the same in country districts and among the well-to-do of Merrie England, so perhaps we should not expect sweet Master Shakespeare to mention difficult labour. If death in child-bed were common, it is hardly likely, considering the enormous wealth of medical lore he gives us, that he would have omitted to make use of the fact in one or other of the plays.

On the other hand, this is perhaps surprising when we remember that rickets, one of the commonest causes of dystocia, existed in the crowded areas of the larger towns in the poet’s time, for within 60 years of his death, the first authenticated description of rickets, *alias* the “English disease” was written by Dr. Glisson.

In *Henry VIII*, V. i., the agony of Anne Boleyn at the birth of the future Queen Elizabeth of England is described:—

“.....the Queen’s in labour,  
They say in great extremity, and feared  
She’ll with the labour end.”

And in contrast it is rather amusing in the last lines of the same scene to observe the disgust of His Majesty when he was told by the garrulous old lady that he had a daughter:

“As like you as a cherry is to cherry.”

It is of interest to note that in *Henry VI*, Part 3, V. vi., the birth of Gloucester is described as ill-omened and difficult in the lines:—

“Thy mother felt more than a mother’s pain,  
And yet brought forth less than a mother’s hope,  
To wit, an indigested and unformed lump.”

And later in the same scene we are told in his own words that he was a footling presentation and born with teeth:—

“For I have often heard my mother say  
I came into the world with my legs forward.  
The midwife wondered, and the women cried  
‘O Jesus bless us he is born with teeth,’  
And so I was. Which plainly signified  
That I should snarl and bite and play the dog.”

Again, it would appear from *Richard III*, IV. iv., that not only does the poet describe the birth of Gloucester as difficult, but it looks as if it was a case of oligoamion and that this was the cause of the deformities, for we read in *Henry VI*, Part 3, III. ii., the words:—

“She did corrupt frail nature with some bribe,  
To shrink mine arm up like a wither’d shrub,  
To make an envious mountain on my back  
Where sits deformity to mock my body,  
To shape my legs of an unequal size,  
To disproportion in every part.”

Moreover it would seem that it was recognised that the fœtus could be deformed or strangled by morbid conditions *in utero*, for we have the lines in *Richard III*, IV. iv.:—

“Oh, that she might have intercepted thee  
By strangling thee in her accursed womb.”

Which would suggest strangulation by the umbilical cord.

*Cæsarean Section.*

There seems little doubt that this operation was well known and talked about in the days of Shakespeare, for not only are there two actual references in the plays, but an expression is used metaphorically in *King John*, V. iii., which would indicate that his audience was well acquainted with the operation. The lines are:—

“You bloody Neros, ripping up the womb  
Of your dear mother England, blush for shame.”

And although Shakespeare may have had “little Latin and less Greek,” it is quite probable that he had heard of those lines in *Ovid* (*Metam. Lib.*, 2. 1. 630):—

*Nature flammis uteroque parentis,  
Eripuit geminique tulit Chironis in antrum.*

Which indicate that Aesculapius was cut from his mother’s womb. Perhaps you will let me remind you of the story, that Coronis, the mother of the unborn Aesculapius by Apollo, was killed by Artemis for unfaithfulness. Her body was about to be burnt on the pyre, when Apollo snatched the boy from his mother’s womb (and the flames) and carried him to the cave of the wise Centaur Chiron, who instructed him in the cure of all diseases, and so he became the great god of medicine to the Greeks.

The operation is of great antiquity, and I think it is to the credit of the Church of Rome that it popularised and countenanced it in mediæval days, doubtless in the teeth of violent hostility. Mr. Herbert Spencer tells us that we owe the title “Cæsarean Section” to a Jesuit priest Theophile Raynaud, who published a

memoir in 1637 entitled *De ortu infantium contra naturam per sectionem Cæsaream tractatio*. Anyhow it can safely be assumed that the popular idea which labels Julius Cæsar as being the first living result of the operation is erroneous, for historically we know his mother lived long after his birth, and had rumour or tradition of such an operation surrounded him, surely Plutarch would have mentioned it and Shakespeare touched upon it in his play. As a matter of interest, it is possible that the word Cæsarean is a play upon the Latin verb *caedo*.

Mr. Herbert Spencer tells us that the first authentic record of Cæsarean section, with the recovery of mother and child, is by Bauhinus. The operation was performed by a sow gelder, Jacob Nufer of Siegershausen, who, after thirteen midwives and several lithotomists had failed to deliver or relieve his wife, decided to operate with a razor *non secus quam porco*. The child lived to the age of 77, the mother recovered and later was delivered of twins, and four other children were born naturally after them. So you see, even in those days "once a Cæsarean, did not mean always a Cæsarean."

The question now arises, whether in his plays Shakespeare refers to the classical operation, or to post-mortem Cæsarean section for you remember that in *Macbeth*, V. vii., the Thane of Glamis boasts:—

"I bear a charmed life, which must not yield  
To one of woman born."

To which Macduff replies:—

"Despair thy charm,  
And let the angel whom thou still hast served  
Tell thee, Macduff was from his mother's womb  
Untimely ripp'd."

To my mind, the interpretation of these lines is that the mother of Macduff perished prematurely or in labour, and, in obedience to the edicts of Holy Mother Church, the baby was cut from her womb.

Again, in *Cymbeline*, V. iv., we have the lines:—

"Lucina lent me not her aid,  
But took me in her throes,  
That from me was Posthumus ripp'd  
Came crying 'mongst his foes,  
A thing of pity."

This, together with the lines in I. i.:—

".....for which their father  
Then old and fond of issue, took such sorrow  
That he quit being, and his gentle lady  
Big of this gentleman, our theme, deceased  
As he was born. The king he takes the babe  
To his protection, calls him Posthumus Leonatus."

Would seem to leave no shadow of doubt that the poet infers post-mortem Cæsarean section, from the play upon the name Posthumus, and the word ripp'd, cf. *eripuit* in the lines of *Ovid*.

#### *The First Cry of the Infant.*

I feel that many a mother in the anxious moments immediately following child birth, when the baby's life is in doubt, will appreciate the lines in *King Lear*, IV. vi.:—

"Thou know'st the first time we smell the air  
We wawl and cry,  
When we are born we cry that we are come  
To this great stage of fools."

#### *Lactation.*

It is interesting to read that Juliet was not weaned until she was three years old. The poet states that the nurse had to put wormwood on her nipples in order to wean the child:—

"When it did taste the wormwood on the nipple  
Of my dug, and felt it bitter, pretty fool,  
To see it tetchy and fall out with the dug."

Despite the prolonged lactation, Juliet does not appear to have been very rickety, for in the same scene we read:—

"For then she could stand alone, nay be the rood  
She could have run and waddled all about."

#### *Sterility.*

In mediæval times there existed, as there does in India to-day, a belief in the efficacy of charms and erotic flagellation for the cure of this condition. In *Julius Cæsar*, I. ii., Shakespeare makes use of Plutarch's description of the feast Lupercalia, in order to remedy Calphurnia's sterility. Let me quote you the passage from Plutarch:—

"In those days many young noblemen and magistrates ran up and down the city with their upper garments off, striking all they met with thongs of hide by way of sport, and many women, even of the highest rank, placed themselves in the way and held out their hands to the lash, as boys in school do to the master, out of the belief that it procures an easy labour for those who are with child, and makes those conceive who are barren."

I'm sure you will like that reference to the boy and his schoolmaster written in A.D. 100, and will wish that there were more of this nowadays in our schools.

The lines of Shakespeare are:—

"Forget not in your speed Antonius  
To touch Calphurnia, for our elders say  
The barren, touched in this body chase  
Shake off their sterile curse."

#### *Aphrodisiacs.*

Throughout the ages much trust has been placed in the doubtful efficacy of such substances. For instance, in *The Merry Wives of Windsor*, V. v., we have the invocation of Falstaff:—

"Let the sky rain potatoes, let it thunder to the tune of Green Sleeves, hail kissing comfits, snow eringoes, let there come a tempest of provocation, I will shelter me here."

The potato of that time was the sweet potato, *Convolvulus battatus*, which like the eringo (sea holly) had the reputation of being able to restore decayed vigor. Of course I need not remind you that our potato of to-day is the *Solanum tuberosum*, and with tobacco, was originally brought from Virginia by Sir Walter Raleigh.

It may interest some of you to know that the tune of Green Sleeves is an old ballad entered at Stationers' Hall in 1580, the words and tune of which are still extant.

Again in *Othello*, I. i., Brabantio infers a secret knowledge of aids to concupiscence when he says:—

"Are there not charms,  
By which the property of youth and maidenhood  
May be abused. Have you not heard, Roderigo,  
Of some such thing?"

And later he accuses Othello of influencing Desdemona:—

"Thou has practised on her with foul charms,  
Abused her delicate youth with drugs, or minerals  
That weaken motion."

#### *Midwives.*

References to midwives are numerous, and it is probable that Shakespeare was thinking of these women when he wrote in *Twelfth Night*, IV. iv.:—

"Carry his water to the wise women."  
But it would appear that the "wise women" were like Dickens' Sarah Gamp, too prone to liquid refreshment, for in the same play II, v., Marcus says:—

"Nay, but say true, does it work upon him?"

And Sir Toby answers:—

"Like *aqua vite* on a midwife."

The midwife of those days apparently exhibited a trait perhaps not altogether obsolete to-day, loquacity, but alas, with us the punishment does not fit the crime. For instance, in *Titus Andronicus*, IV. ii., because she was "a long tongued babbling gossip," the midwife was murdered in order to stay the evidence of illegitimacy in her patient!

But against this, there are those lines in *Romeo and Juliet*, I. iv., referring to Queen Mab as the fairies' midwife:—

"This is the hag, when maids lie on their back  
That presses them, and learns them first to bear,  
Making them women of good carriage."

## Medico-Legal.

Apart from the reference in *The Winter's Tale*, II, ii., where Paulina asseverates the law of all countries of all times, that a woman pregnant cannot suffer capital punishment, in the lines:—

"This child was prisoner to the womb and is  
By law and process of great nature, thence  
Freed and enfranchised, not a party to  
The anger of the king, nor guilty of  
If any be, the trespass of the queen."

There is the claim of Joan of Arc in *Henry VI*, Part I, V, v., exemption from execution, on the plea of pregnancy:—

"I am with child, ye bloody homicides  
Murder not then the fruit within my womb,  
Although ye hale me to a violent death."

It is only fair to Shakespeare's memory to state that eminent modern scholars doubt whether he was the author of the above episode in this play. They aver that the original manuscript was tinkered with, and its author accepted the idle rumours of her enemies against the Maid, just as we accepted the most amazing reports about the Germans in the Great War. For if you will read Andrew Lang's masterpiece *The Maid of France*, you will see that there is irrefutable evidence produced of her austere chastity throughout life, and you will recall her last piteous appeal:—

"Alas will they treat me so horribly and cruelly  
and burn my body, that never was corrupted, and  
consume it to ashes this day."

Although not strictly relevant to gynæcology, it is a curious fact that the poet should allude in *Cymbeline*, I, iv., to animal experimentation for the purpose of discovering the potency of drugs. Perhaps he had read, or heard of the experiments of the perfidious Cæsar Borgia, for in the same play he describes the effects of chronic arsenic poisoning,

"A mortal mineral, which being took should by  
the minute, feed on life, and lingering, by inches  
waste you."

Of acute arsenic poisoning, he gives a vivid description in *King John*, V, vi.

There are several other references to poisonous drugs in use at that time, for instance the line in *Hamlet*, IV, vii.

"I have bought an unction of a mountebank"  
would seem to indicate curare, whereas the words I, v.

"With juice of cursed hebenon in a vial"  
must mean hemlock (Conium) which you will remember Socrates died of. The lines in *Macbeth*, I, iii.,

"Have we eaten of the insane root  
That takes the reason prisoner"  
refers of course to Henbane (*Hyoscyamus*)

"which if it be eate or dronke, it breedeth madness  
or slow likeness of sleepe."

Personally, speaking of drugs, the line that I like best is that appeal of Cleopatra to Charmian

"Give me to drink mandragora,  
That I might sleep out this great gap of time  
My Anthony is away."

Though perhaps Iago's description in *Othello*, III, iii., is almost as fine

"Not poppy nor mandragora,  
Nor all the drowsy syrups of the world,  
Shall ever medicine thee to that sweet sleep  
Which thou ow'dst yesterday."

It may interest you to know that Mandragora or Mandrake, was the antispasmodic that Reuben gave to Leah, and which was so helpful to Rachel in *Genesis*, XXX, 14.

And Reuben went in the days of wheat harvest and found mandrakes in the field, and brought them unto his mother Leah. Then Rachel said to Leah,

"Give me I pray thee of thy son's mandrakes."  
"And Jacob slept that night with Leah and she conceived." And later also "Rachel conceived."

## Diseases met with in the Tropics.

## Malaria.

In the low-lying and undrained areas of England, malaria was more or less endemic in the days of Shakespeare, consequently it is not surprising to find in his plays numerous references to this disease. The general opinion in those days—which held till the discoveries of Laveran and Ross, was that malaria arose from inhaling the miasma of sun warmed swamps, for in the *Tempest*, II, ii., Caliban says

"All the infections that the sun sucks up  
From bogs, fens, flats, on Prosper fall  
And make him by inchmeal a disease."

and again in *Julius Cæsar*, II, i.  
"Is Brutus sick, and is it physical to walk  
unbrac'd, and suck up the humours

Of the dark morning.  
To dare the vile contagion of the night,  
And tempt the rheumy and unpurg'd air,  
To add unto his sickness"

and in *King Lear*, II, iv.  
"..... infect her beauty  
You fen sucked fogs, drawn by the powerful sun  
To fall and blast her pride."

Further, in *Timon of Athens*, IV, iii.  
"O blessed breeding sun, draw from the earth  
Rotten humidity, below thy sisters orb  
Infect the air."

The various clinical types of fever are recognised in several places. For instance in *Henry V*, II, i., Dame Quickly speaks of Falstaff as

"So shaken of a burning quotidian, that it is most  
lamentable to behold."

In *Richard II*, II, i., we read of the death of John of Gaunt

"presuming on an ague's privilege"  
also in *Julius Cæsar*, I, ii., we have reference to the rigor, pallor, and wasting after malaria in the lines

"When the fit was on him I did mark  
How he did shake, his coward lips  
Did from their colour fly,  
And that same eye did lose his lustre, I did  
hear him groan

And that tongue of his, alas it cried  
Give me some drink, Titinius."

also in II, ii.

"Cæsar was ne'er so much your enemy  
As that same ague which hath made you lean."

In *The Tempest*, III, ii., the delirium of malaria is described

"He is in his fit now, and doth not talk  
after the wisest"  
and in *As You Like It*, III, ii., there is that beautiful metaphor

"He seemed to have the quotidian of love upon  
him, he that is so love shak'd."

It is interesting to note that in *Troilus and Cressida*, III, iii., Shakespeare recognised that an attack of ague might be precipitated by exposure to the sun—insolation—for we have the lines

"And danger, like an ague subtly taints  
Even then when we sit idly in the sun."

## \*Plague.

There are innumerable allusions to the plague, for it must be remembered that in the poet's day the City of London was rarely free from this disease. In the various references to the pestilence, it is difficult at times to know whether the poet inferred bubonic plague or typhus, for both diseases were equally common and may frustrate diagnosis even to-day. For instance, in *Coriolanus*, IV, i.

"Now the red pestilence strike all trades in  
Rome, their occupations perish."  
and in *The Tempest*, I, ii.

"The red plague rid you for learning me  
your language"

and in *Troilus and Cressida*, II, i.

"A red murrain on thy jades tricks"  
and in iii.

"He is so plaguey proud, that the death tokens cry 'No recovery.'" Whatever the actual disease, it is obvious that it was then recognised as being very infectious, for in *Twelfth Night*, I. iv., we read

"Even so quickly may one catch the plague" and in *Richard II*, I. iii.

"Suppose devouring pestilence hangs in our air, And thou art flying to a fresher clime."

In this connection it is of great interest that Shakespeare should refer to two methods of treatment which were as common then as they are in the East to-day, for in *Coriolanus*, III. i., we read of segregation in the case of infectious diseases

"Pursue him to his house lest his infection, being of catching nature, spread further." whereas in *Romeo and Juliet*, V. ii., infected individuals are forcibly interned in their own house

"..... the searchers of the town Suspecting that we both were in a house Where the infectious pestilence did reign, Sealed up the doors and would not let us forth."

Finally, while speaking of quarantine, perhaps you will allow me to quote Shakespeare's dear thought of England and his appreciation of our island home being segregated from the external world, in those lines from *Richard II*, II. i.

"This fortress built by nature for herself, Against infection and the hand of war."

#### Dysentery.

There are but few allusions to this malady, which considering the many scenes of camps and battle, is perhaps remarkable, but there is the following line in *Titus Andronicus*, III. i.

"My bowels cannot hide her vomit, But like a drunkard must I vomit them"

and in *Troilus and Cressida*, II. ii.

"No lady of more softer bowels, more spongy to suck in the sense of fear."

I have often wondered why some modern pill vendor, or patient with chronic constipation has not adopted Hamlet's words

"For this relief, much thanks."

#### Anæmia.

We have noted the pallor which the poet associated with malaria, but it is obvious that he had observed chlorosis, or secondary anæmia of women, as a thing quite apart from the same condition in men, for in *Twelfth Night*, II. iv., we have those beautiful lines

"..... she never told her love But let concealment like a worm i' the bud Feed on her damask cheek, she pined in thought And, with a green and yellow melancholy, She sat like patience on a monument Smiling at grief"

and in *Romeo and Juliet*, IV. i., the still more beautiful lines

"The roses in thy lips and cheeks Shall turn to paly ashes."

Whereas in *Henry IV*, Part 2, IV. iii., Falstaff refers to male green sickness in words which are, I think, of particular interest to us in Bengal,

"For thin drink doth so overcool their blood, and making many fish meals they fall into a kind of male green sickness, and then when they marry they get wenches. They are generally fools and cowards, which some of us should be, but for inflammation."

And in *Anthony and Cleopatra*, III. ii., we read

"And Lepidus is troubled with the green sickness."

#### Consumption.

First we have those lovely lines in *A Winter's Tale*, IV. iii., which are so peculiarly applicable to the zenana world of India

"..... pale primroses That die unmarried, ere they can behold Bright Phoebus in his strength, a malady Most incident to maids."

and then, in *Troilus and Cressida*, V. iii., the wasting bite of consumption, as possibly complicating syphilis or malaria is described

"A whoreson ptisick, a whoreson rascally ptisick so troubles me, and I have such an rheum in mine eyes and ache in mine bones, that unless a man were cursed, I cannot tell what to think on it"

again, in *A Lover's Complaint* we find a reference which may be construed to mean the fetid breath of the consumptive,

"Oh, that sad breath his spongy lungs bestowed."

#### Hydrophobia.

It is obvious that this was well known to follow the bite of a rabid dog, for in *The Comedy of Errors*, V. i., we have the lines

"The venom clamours of a jealous woman, Poison more deadly than a mad dog's tooth."

#### Pyorrhœa.

I expect most of you are aware that the modern tooth brush came into fashion about 1700. Prior to this little care was taken of the teeth except perhaps the occasional use of the stick customary in India to-day. It is however probable that caries was rare in those days because of breast feeding, a full vitamine diet and the scant use of knife and fork, but there can be little doubt that pyorrhœa did exist, for we have the lines in *Coriolanus*, II. iii.,

"Bid them wash their faces and keep their teeth clean,"

and in *Julius Cæsar*, I. ii., Casca says

"The rabblement uttered such a deal of stinking breath."

Moreover you will remember in *The Merry Wives of Windsor*, Falstaff speaks of "kissing comfits," which refers to a custom of taking perfumed cachous to sweeten the breath, a habit referred to in *Romeo and Juliet*, I. iv.

"Because their breaths with sweetmeats tainted are."

In the epilogue to *As You Like It*, it would appear that halotitis was unpleasantly common in Elizabethan days, for Rosalind says,

"If I were a woman, I would kiss as many of you as had breaths that I defied not."

Finally we have those caustic lines in the 130th Sonnet which Mr. G. B. Shaw observes is such anathema to women,

"And in some perfumes is there more delight, Than the breath that from my mistress reeks."

#### Syphilis.

There are so many references to this malady under various titles such as "the French disease," the "rotten disease of the South," "the Neapolitan disease" that I need not detail them, except perhaps in the interests of syphilographers to say that the most arresting are to be found in *Hamlet*, V. i., *Measure for Measure*, I. ii., *Henry V*, II. ii., and *Timon of Athens*, IV. iii.

#### Incontinence of Urine.

You are all aware that this is a condition often seen in children and prostatic old men, but perhaps not many of you know that Shakespeare mentions the fact—which is corroborated by Ben Jonson in his play *Everyman in His Humour*, and is vouched for by the Hon. Robert Boyle,—that it is proverbial that the music of the bagpipes has the power to produce enuresis. Here are the lines in *The Merchant of Venice*, IV. i.

"Some men there are that love not a gaping pig, Some that are mad if they behold a cat, And others, when the bagpipes sing i the nose Cannot contain their urine."

Ben Jonson's lines are

"What ails thy brother? Cannot he hold his water at the reading of a ballad?"

"Oh no, a rhyme to him is worse than cheese or a bagpipe."

*Goitre.*

Shakespeare, living in Stratford, must have seen many cases of Derbyshire neck which was doubtless as common then as it is in the Darjeeling hill tracts to-day. Therefore I am sure these lines in *The Tempest*, III. iii., will appeal to you

"Who would believe that those were mountaineers,  
Dewlapp'd like bulls, whose throats had hanging  
At them wallets of flesh."

*Pruritus.*

It is obvious that scabies was known and its cause understood, for in *Romeo and Juliet*, I. iv., we have the reference

"Not half so big as a round little worm,  
Prick'd from the lazy finger of a maid"  
and again in *The Tempest*, II. ii.  
"Yet a tailor might scratch her where'er she  
did itch"

and in *Coriolanus*, I. i., Marcius says  
"What's the matter, you licentious rogues, that  
rubbing the poor itch of your opinion, make  
yourselves scabs."

*Diagnosis by the Appearance of the Urine.*

This is probably one of the very oldest methods of diagnosis, and as you are aware it still exists in the East amongst Ayurvedics and the followers of the Baghbat. In Shakespeare's time this custom was called "water casting," and there are many references to it throughout the plays. Perhaps the best known occurs in *The Two Gentlemen of Verona*, II. i.

"These follies shine through you like water in a  
urinal, that not an eye that sees you but is a physician  
to comment on your malady."

*Diet.*

I feel sure that my Hindü and vegetarian friends will feel complimented by the lines in *Twelfth Night*, I. iii.

"I am a great eater of beef, and I believe  
that does harm to my wit"  
to which Sir Toby feelingly replies

"No question about it"  
but they should mark well the words of Longaville in  
*Love's Labour Lost*, I. i.

"Fat paunches have lean pates, and dainty bits  
Make rich the ribs, but bankrupt quite the wits."

On the other hand, in *Julius Cæsar*, I. ii., the folly of asceticism is described as follows,

"Let me have men about me that are fat,  
Sleek headed men and such as sleep o' nights,  
Yon Cassius has a lean and hungry look,  
Such men are dangerous."

In *The Comedy of Errors*, V. i., there is good advice for doctors and students, who as you know, due to hurried and irregular meals, are prone to suffer from indigestion and duodenal ulcer, for it is written

"Unquiet meals may give you indigestion."  
and in *Macbeth*, III. iv.

"Let good digestion wait on appetite, and  
health on both."

For those who are romanticists I like the words of Speed in *The Two Gentlemen of Verona*, II. i.

"Though the chameleon love, can feed on air I am  
one that am nourished by my victuals, and would fain  
have meat."

To show you in India, Shakespeare's appreciation of the importance of a clean milk supply, surely there is nothing to equal Launcelot's remark in III. i., of the same play,

"She can milk, look you, a sweet virtue in a  
maid with clean hands."

Speaking of public health, it is of more than ordinary interest to find that even so long ago as the days of Shakespeare, flies were looked upon as carriers, for in *Romeo and Juliet*, III. iii., we have those beautiful lines

"..... more courtship lives  
In carrion flies than Romeo, they may seize  
On the white wonder of dear Juliet's hand  
And steal immortal blessing from her lips.  
Flies may do this, when I from this must fly."

*Alcohol.*

Merrie England in the days of Shakespeare was well noted for its beer drinking propensities, vide *Othello*, II. iii., but it is doubtful whether the mead and hop grown beer did much harm. The poet-actor-manager lived in convivial times, therefore it is a pleasure to read in *Henry VIII*, I. iv.

"Good company, good wine, good welcome,  
Can make good people"  
but I think our Scotch and American friends respectively will appreciate the lines in *Othello*, II. iii.

"Come lieutenant, I have a stoup of wine."  
"Not to-night good Iago, I have a very poor and  
unhappy brain for drinking. I could well wish  
courtesy would invent some other form of entertain-  
ment"

but I doubt if even a Scotsman would accept the advice of Falstaff in *Henry IV*, Part 2, IV. iii.

"If I had a thousand sons the first human principle  
I would teach them, would be to forswear a thin  
potation and addict themselves to sack."

*Mental Disorders.*

Nothing illustrates the genius of William Shakespeare as well as his reading of the mind with the causation and development of mental diseases. To those who are particularly interested I may refer them to the book of Dr. John Bucknill published in 1867 on *The Mad Folk of Shakespeare*. For our purpose it will be sufficient to remind you that "Othello" and Julius Cæsar suffered from epilepsy, which in the latter play Brutus calls "the falling sickness."

In *King Lear*, II. iv., we have the curious reference to *hysterica passio*, and in *Troilus and Cressida*, II. iii. Ulysses describes the symptoms of Achilles in words which seems to indicate his disease as incipient general paralysis of the insane.

The tragedies of Macbeth and Hamlet portray a knowledge of psychological medicine without parallel in literature, and those of you who have had occasion to be called to such a case, will appreciate the words of the canny Scotch doctor in *Macbeth*, III. i.

"This disease is beyond my practice, I think but  
dare not speak, more needs she the divine than the  
physician."

as he discreetly tries to pass her on to the confessional. Moreover, I like to think that that same canny doctor perhaps originated the Rule of the Commissioners of Lunacy that we should record a patient's own words as evidence of mental instability, for you will remember he says

"I will set down what comes from her to satisfy  
my remembrance the more strongly."

There seems little doubt that Shakespeare foreshadows the principles of modern psycho-analysis in those famous lines

"Canst thou not minister to a mind diseased,  
Pluck from the memory a rooted sorrow,  
Raze out the written troubles of the brain  
And, with some sweet oblivious antidote  
Cleanse the clogg'd bosom of that perilous stuff  
Which weighs upon the heart"

and I feel that the authorities of all mental hospitals will rejoice that the proper treatment of mental diseases can be credited to his genius, for in *Much Ado About Nothing*, V. i., we read

"Fetter strong madness in a silken thread,  
Charm ache with air, and agony with words."

There are many other references to melancholia and mania in the plays, for instance in the *Comedy of Errors*, and *King Lear*, but it is worthy of note that the poet urges the physician to be sanguine even in the

most anxious moments, for in *Love's Labour Lost*, V. ii., we read

"Your task shall be with all the fierce  
endeavour of your wit,  
To enforce the pain'd impotent to smile"

for "The miserable have no other medicine,  
But only hope."

Finally, there are those wise lines in *King Henry IV*, Part 2, III. i., which to my mind are so apposite to the state of politics in England and India to-day,

"Then you perceive the body of our kingdom  
How foul it is, what rank diseases grow  
And with what danger near the heart of it"

to which Warwick answers  
"It is but as a body yet distempered,  
Which to his former strength may be restored  
By good advice and little medicine."

If one reads Shakespeare earnestly one realises how prophetic he is and how nearly he touches existence and customs to-day. For instance, I think he must have foreseen the modern jazz band for, although he frequently speaks of music as a remedy, he is equally emphatic that as a soothing agent it may have an opposite effect. In *Richard II*, V. v., he writes

"This music mads me; let it sound no more;  
For, though it have help madmen to their wits,  
In me, it seems, it will make wise men mad."

Again, he foresees modern late hours and overeating and describes an excellent remedy. Here are the lines in *Henry IV*, Part 2, IV. i.

".....We are all diseased  
And, with our surfeiting, and wanton hours,  
Have brought ourselves into a burning fever,  
And we must bleed for it."

Again, perhaps we owe the modern waistless line of women to Shakespeare, for we read the words of Queen Elizabeth in *Richard III*

"..... Ah! cut my lace asunder,  
That my pent heart may have some scope to beat."

However, it is nice to read in *The Comedy of Errors* that Dr. Pinch had a good bedside manner. The line reads

"Give me your hand and let me feel your pulse."  
And the description of a lady's voice

"Her voice was ever soft,  
Gentle and low, an excellent thing in woman"

Although the poet seems to appreciate the effect of the recent festive season in the line

"For my voice I have lost with hollaing and  
singing of anthems"

it is obvious that Shakespeare was well aware of the benefits of fresh air, for we read such lines as

"The most wholesome physic of thy health  
giving air."

"The air is quick and it pierces and sharpens  
the stomach."

"There's fresher air my lord in the next chamber,  
Lead in your ladies."

Finally, let us not forget those words  
"Our remedies oft in ourselves do lie,  
Which we ascribe to Heaven."

The poet's estimation of a patient's gratitude is as true to-day as three hundred years ago.

"Blow, blow thou winter wind,  
Thou art not so unkind  
As man's ingratitude."

But, remember he does not overestimate the help of medicine, for we read

"..... I consider  
By medicine life may be prolong'd, yet death  
Will seize the doctor too."

*Prognosis.*

It is said of Sir William Osler that he never saw a patient, however desperately ill, without leaving behind him an atmosphere of hope. The same idea is to be found in *Anthony and Cleopatra*, II. v.

"Though it be honest, it is never good  
To bring bad news"

for we read in *Henry IV*, Part 2, I. i.

"He that but fears the thing he would not know,  
Hath by instinct, knowledge from others eyes  
That what he feared, is chanced."

It is worthy of note that the poet well understood the importance of the previous history of adjuvating disease, for in *Henry IV*, Part 2, III. i., we read

"There is a history in all men's lives  
Figuring the nature of the times deceased,  
The which observed, a man may prophesy  
With a near aim, of the main chance of things  
As not yet come to life."

Gentlemen, the time allotted me is coming to an end, and you remember what Lord Say remarked in *Henry VI*

"Long sittings to determine poor men's causes,  
Hath made me full of sickness and diseases."

Nevertheless, I trust you will not think of me as  
"A fellow of infinite jest and most excellent fancy"

who "waxes desperate with imagination,"  
but rather believe that

"My endeavour has been  
To frame your mind to mirth and merriment,  
Which bars a thousand harms, and lengthens life"

and so "Give me commendation for my free  
entertainment."

I know I have but touched upon the fringe of this great subject and my thesis is but a thing of "shreds and patches," but if I have awakened fresh interest in the world's greatest poetic genius, I shall consider myself sufficiently rewarded.

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THE VALUE OF MEDICAL SOCIETIES.\*

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LADIES AND GENTLEMEN,

It is my first and pleasing duty to offer you my cordial thanks for the honour you have done me by electing me to be your president during the ensuing year. It is an honour which I deeply appreciate, but when I accepted it I was not aware that the duties of the office embraced the delivery of a presidential address, but the Council has recently decided to add this new feature to the agenda of our annual meetings. I must therefore bow to its decision—and at the same time crave your indulgence whilst I endeavour to fulfil the duty imposed upon me. The subject upon which I propose to address you is the value of medical societies. Of societies in general, whose number is legion, I do not propose to speak. All no doubt perform useful services in greater or less degree, but there are peculiar features attaching to medical societies which render them, with due regard to the limitations

\*The presidential address delivered before the Punjab Branch of the British Medical Association on 9th March, 1930.