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THE ILLNESS AND DEATH

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OF

HENRY PRINCE OF WALES

IN 1612.

A Historical Case of Typhoid Fever.

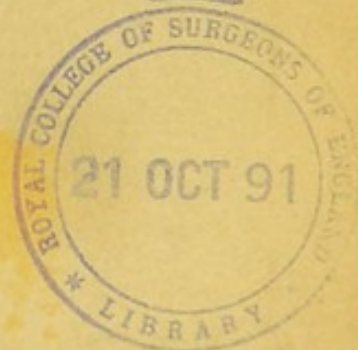
BY

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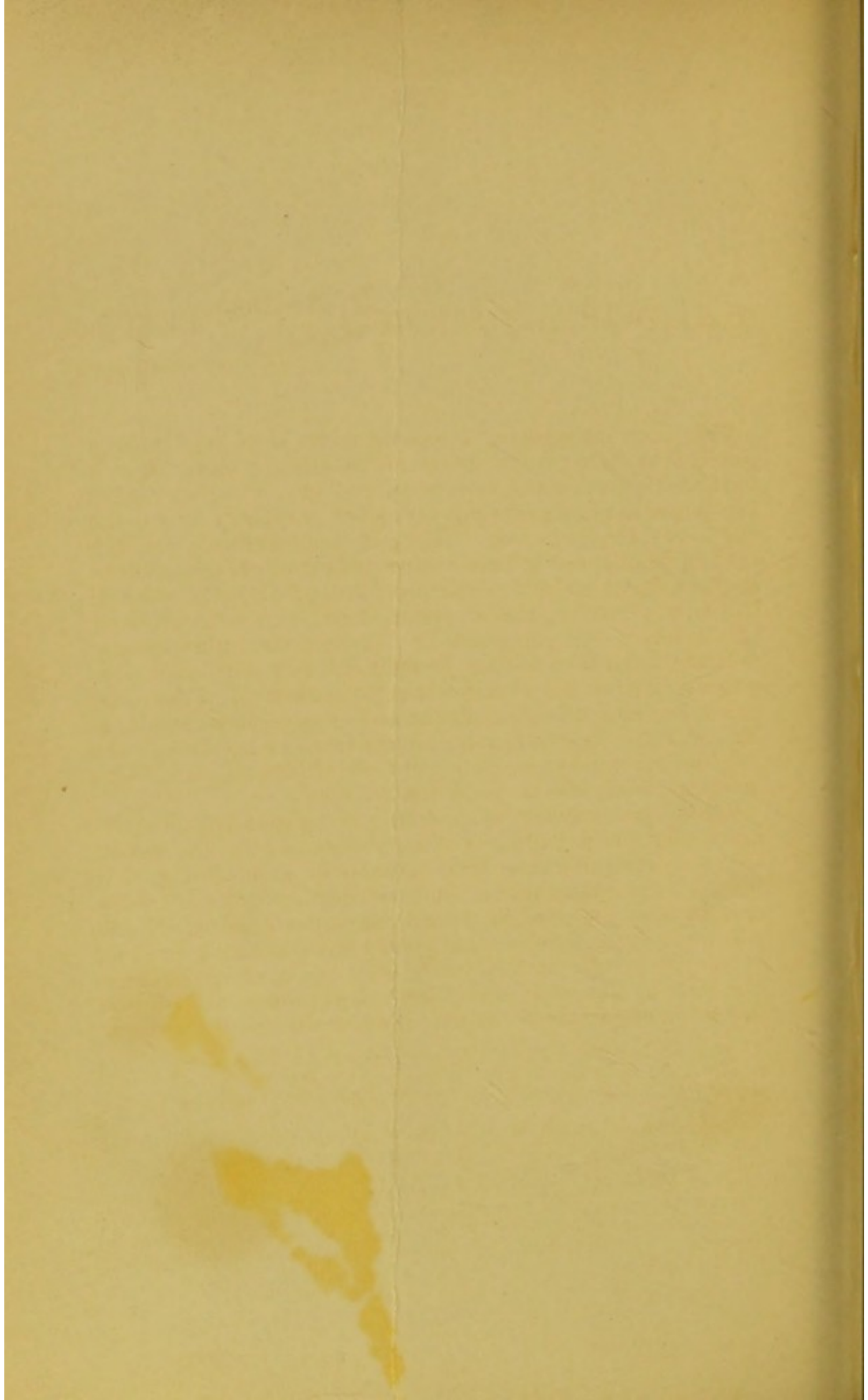
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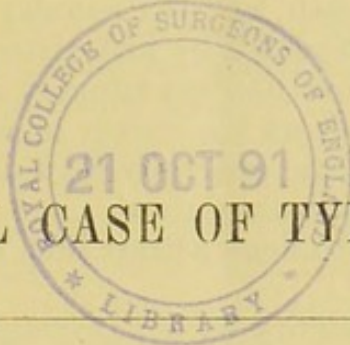
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A HISTORICAL CASE OF TYPHOID FEVER.

THE exact knowledge of typhoid fever is of very modern growth, yet there are few diseases of which it is more difficult to state the first date of precise description. The discovery of the anatomical changes which take place in typhoid fever is not due to any single observer. It began in observations in which typhoid was noticed to have distinctive anatomical appearances, but in which it was not completely disentangled in the minds of the writers from the almost innumerable fevers with which in old times it was confounded. Accumulated observations, tabulated from time to time, brought out with more and more precision the features, symptomatic and anatomical, of the fever, and at last established the disease among those about which, so far as morbid anatomy is concerned, there is no doubt.¹ In England this precise distinction of typhoid from all other fevers has been mainly due to Sir William Jenner.

Though its discovery in a scientific sense is of our own day, many cases are to be met with in history and in old medical writings which may have been examples of typhoid fever.² I have, I think, found one in which the facts recorded are sufficient to carry the question beyond the region of possibility, and admit of a demonstration that typhoid fever existed in England in the year 1612. In that year Henry, Prince of Wales, eldest son of King James I, died, after a short illness, of a disease which the physicians of the time were unable to diagnosticate

¹ Watson, 'Lectures on Physic,' 5th ed., Lond., 1871, ii, 865. Barthez, E., et F. Rilliet, 'Maladies des Enfants,' 2nd ed., Paris, 1853, ii, 664. Sir William Jenner, 'On the Identity or Non-identity of Typhoid and Typhus Fevers,' London, 1850.

² Even the fever of which Alexander the Great died may have been typhoid, though the details given in Arrian are insufficient to prove this. Sir Henry Hallford ('Essays and Orations,' 2nd ed., Lond., 1833, p. 166) thought Alexander's disease a remittent fever, and Littré ('Médecine et Médecins,' 3rd ed., Paris, 1875, p. 413), in his admirable essay on the same subject, says that the fever was one of those "que plusieurs médecins de l'Algérie ont désignées sous le nom de pseudo-continués;" but a typhoid fever aggravated by the treatment is not inconsistent with the description.

further than that it was a fever. Poison was suggested at the time as the cause of death, and the popular groundless rumour has been occasionally repeated by historians,¹ but neither then nor since has this rumour had any support even in opinion, and the disease which cut short the career of a prince from whom much was hoped has been generally regarded by historians as natural in its origin but unexplained.

I hope in this paper to demonstrate that Prince Henry Stuart died of typhoid fever.

I was led to the inquiry by a paragraph in Roger Coke's amusing history of the reigns of the Stuart kings,² which excited my curiosity as to the Prince's malady. As Coke's book is not in every library, I will quote the passage,³ and shall venture to give also some preceding paragraphs, so as to recall Prince Henry himself to recollection, before proceeding to the history of his fatal illness.

"This year was wounded up in a mournful catastrophe, for upon the 6th of November Prince Henry died in the beginning of the blossom of his youth, being 18 years, 8 months, and 17 days old; a Prince adorned with wisdom and piety above his years, strength and ability of body, equal to any man, of a noble and heroick disposition, and an hater of flatteries and flatterers, and therefore fell flat at odds with Rochester, not once giving him any countenance or vouchsafing him his company.

"I have heard my father (who was about the Prince's age) tell several stories of him. Once when the Prince was hunting the stag, it chanced the stag being spent crossed the road, where a butcher and his dog were travelling. The dog killed the stag, which was so great that the butcher could not carry him off. When the huntsman and company came up they fell at odds with the butcher, and endeavoured to incense the Prince against him; to whom the Prince soberly answered, 'What if the butcher's dog killed the stag, what could the butcher help it?' They replied, 'If his father had been served so, he would have sworn so as no man could have endured it.' 'Away,' replied

¹ Sir Thomas Lake: Letter to Sir D. Carleton, Nov. 10, 1612. 'Calendar of State Papers' (1611-1618), p. 155.

"Violent reports were propagated, as if Henry had been carried off by poison; but the physicians on opening his body found no symptoms to confirm such an opinion."—Hume, 'Hist. of England' (ed. Lond., 1848), iv, 269.

"Rumours of his having died of poison were immediately abroad, and in spite of the most decisive proof of his natural death in the report of his attending physicians, continued to be repeated for more than a century."—Sir J. Mackintosh, 'Hist. of England' (ed. Lond., 1835), iv, 236.

² 'A Detection of the Court and State of England during the Four Last Reigns and the Interregnum,' by Roger Coke, Esquire. Two vols. London, 1696. 2nd edition.

³ Coke, 'Detection,' p. 56.

the Prince; 'all the pleasure in the world is not worth an oath.' Another time, when the French ambassador came to take his leave of the Prince, the ambassador asked him what service he would command him to his master. The Prince bid him tell his master what he was doing, being then tossing a pike. The Prince had a high esteem for Sir Walter Raleigh, and would say no other king but his father would keep such a man as Sir Walter in such a cage, meaning the Tower.

"His court was more frequented than the King's, and by another sort of men; so that the King was heard to say, Will he bury me alive? And the high Church-Favourites tax him for being a patriot to the Puritans. Never was any Prince's death more universally and cordially lamented, and the more by how much the suddenness of his death being known before his sickness was scarce heard of, was surprising. As men's humours flowed, they vented their passions; some said a French physician killed him; others, he was poisoned; and it was observed that poisoning was never more in fashion than at this time; others, that he was bewitched, &c.

"Whether it were to appease these clamours, or out of curiosity, I cannot tell; but Dr. Mayerne, Dr. Atkins, Dr. Hammond, Dr. Palmer, Dr. Gifford, and Dr. Butler were ordered to dissect the Prince's body the next day after his death, and to give their opinions of it, which were—

"*First*, they found his liver paler than ordinary, in certain places somewhat wan; his gall without any choler in it, and distended with wind.

"*Secondly*, his spleen, in divers places, more than ordinarily black.

"*Thirdly*, his stomach was in no part offended.

"*Fourthly*, his midriff, in divers places, black.

"*Fifthly*, his lungs were very black, and in divers places spotted and of a thin watery blood.

"*Sixthly*, that the veins of the hinder part of his head were fuller than ordinary, but the ventricles and hollowness of the brain were full of clear water."

In the Record Office, I found the original of Coke's account of the autopsy, and in the works of Sir Theodore Mayerne the clinical notes of the case written by Mayerne himself, with his opinions, and those of the other attendant physicians. These notes I reduced to modern form, adding nothing, and on reading them, found that a case of typhoid fever was very clearly described. Mayerne's works contain two accounts; one in French, apparently for the court and public; and one in Latin, in which technical expressions are more fully used, and which

was probably intended for his profession and the learned world in general.¹

I shall first give a translation of Mayerne's French and fuller account of the Prince's illness, and shall then state in a concise form and in modern terms the symptoms recorded.

Mayerne² was at the time physician to King James I. He is the French physician alluded to in the passage I have quoted from Coke, and had the chief direction of the case. I have omitted nothing but a page of preface in which the reasons for publishing an account of the case are set forth—that it is to explain a death which the age and constitution of the Prince had made unexpected, to answer malignant talkers, and to make the truth known.

“ True Account of the Illness, Death, and Opening of the Body of the Most High and Most Illustrious Henry, Prince of Wales, deceased, at St. James's in London, the 6th of November, 1612.

“ Mors sceptrum ligonibus æquat.

“ The fact is as follows:—

“ His Highness was in the nineteenth year of his age, and of a very warm constitution, wont to bleed very often and much, from the nose, even without exercise, but much more after violent bodily exertion. This natural evacuation was suppressed for three months during the past summer of this year 1612 (excessive in degree and continuance of heat beyond the memory of living man in England). The Prince continually fatigued his body by exercises and violent occupations, hunting in the heat of the day, riding and playing tennis, and in consequence he often heated his blood extraordinarily (for it was his habit, having started in the morning, not to sit down all day long). And further, he ate strangely to excess of fruit, and especially of melons and of half-ripe grapes, and often eating his full of fish and of raw and cooked oysters beyond rule or measure at each meal, three or four days of the week. He would moreover finish, in order to cool the burning heat which worked in

¹ Theo. Turquet Mayernii, ‘Opera Medica,’ ed. J. Browne, London, 1701. Another copy in the Library of the Royal College of Physicians is dated 1700, but in no way differs from this: 1701 seems the true date of the edition.

² T. T. Mayerne was son of Louis T. de Mayerne, who wrote a history of Spain. He was born near Geneva in 1573, and Beza was his godfather. He took his M.B. degree at Montpellier in 1596; his M.D. in 1597. He was successively physician to Henry IV of France, James I, Charles I, and Charles II, of England. He died at Chelsea in 1655. Astruc, ‘Mémoires pour servir à l’Histoire de la Faculté de Médecine de Montpellier.’ Edited by Dr. Lorry. Paris, 1767.

his body during the summer, by plunging into the river after supper, his stomach full, and would remain several hours in the water.

“After all these irregularities he fell ill at Richmond on the 10th of October, 1612.

“On the two following days he had two accesses of fever, with shivering and heat, but without subsequent sweat. He was seen by his usual physician, who ordered him simply a softening clyster without any laxative. After a gentle action, the humours having been moved which were in his repleted body, the next day his bowels were opened twenty-five times, and a very great quantity of bile, decomposed and disgusting, and at the last some phlegm.

“This evacuation did good, but the root of the disease remained fixed, and his body being disturbed by restlessness, lassitude, and broken sleep, his Highness’s physician decided to purge him with the pills the Prince had been accustomed to take before meals, which operated gently four or five times, and with much relief. Nevertheless, some days after the disease had gained ground little by little, and nature given way to morbid influences (although his Highness struggled against his malady, trying to hide it, and to throw it off).

“On the 15th day after the first beginning of all his indisposition, which was the Sunday, October 25th, his Highness, who had been very ill on Saturday (although he was seen to play tennis), and had found himself much worse on Sunday morning, having a pale and washed-out face, his eyes hollow and dull, being at Whitehall at three in the afternoon, fell into a slight fainting fit (an accident frequent in him and in many of his race), which was followed by a slight shivering and a hot fit, with severe headache. His headache had been continuous for several days, with some dizziness, especially when he wished to get out of bed. At last his Highness had an access of fever. Whereupon his Majesty having sent to him Dr. Mayerne, his first physician, he reached the Prince at eight in the evening, and found his Highness in a fever, his face red, his eyes troubled, being unable to bear the light of the candle; black lips, tongue dry, with an extreme thirst (which distressed his Highness very much throughout), but with his brain unaffected, and able to understand his bad condition. For the time the doctor contented himself with ordering a cordial and refreshing ptyisan to appease the thirst, and broth to be swallowed at the end of the access.

“The next day Dr. Hammon,¹ his Highness’s usual physi-

¹ John Hammon, M.D. (Trinity College, Cambridge), Munk. Roll, i, 147,

cian, and the above Dr. Mayerne, the King's physician (sent by his Majesty), met, and having considered that his Highness had had a very restless night (as the five or six preceding nights had also been), and finding him with the same thirst and dryness as before, with trembling of the nervous parts, and the belly tense, urine abundant and white, and constipation, they agreed to order him a lenitive clyster, which purged him gently three or four times of yellow and very fœtid bile.

"All this day his Highness was without fever. He rose and played after dinner with my lord the Duke of York, having always a distressed countenance and dryness of mouth, with extreme thirst, to meet which cordial refreshing juleps were ordered for him, acid, and in which (to prevent all malignity) were not forgotten behazar, unicorn horn, and similar antidotes. His soups were made with the same object, and all the rest of his diet had the same end. As usual his night was restless, and the thirst, which they tried to control with the above juleps, constant.

"The next day, at three in the afternoon, the access came with cold and great heat, which increased with all the above-described accidents till eight o'clock. At nine the fever grew less, and ceased altogether after ten. In the morning his Highness slept pretty quietly. However, great rumblings in the belly were audible, and the hypochondria were more tense than natural.

"Which points considered, the aforesaid doctors having fought the battle by cordials all this day, and reckoning the date of the disease from Richmond, and not only from the Sunday, and considering the profit which his Highness had received from the evacuations, whether natural or artificial, which had gone before, and again casting an eye on his way of life and on the great abundance of decomposed humours which were within the natural parts, and which had lighted up or had created a fever which followed the movement of a tertian (malignant above all because of the remarkable decomposition, and almost becoming continuous for the quantity of the matter, as after it became), the aforesaid doctors consulted as to a light purgation, sufficient only to lessen the quantity of the humours. They judged it the more necessary because the last clyster and the sounds audible in the belly incited to relieve nature on this side. His Highness was, moreover, asked by the said doctors to call advice to deliberate and discuss more fully on this

father of the Latinist, to whom William Wotton, the youthful prodigy, was compared by the Master of Catherine Hall. "*Nec Hammondo nec Grotio secundus.*"
—Monk, 'Life of Bentley.'

affair. This he declined at once, not wishing to have a number of physicians, as those who came could learn from his expression, and as his Majesty can testify. Thus not to let the day following pass without doing this which was very necessary, his Highness being altogether without fever, a mild medicine was given to him of senna boiled, and rhubarb infused in cordial and refreshing liquors, and of syrup ræsat. solutif. This medicament acted with an incredible gentleness seven or eight times, and drove out decomposed bile and at the end mucus. From this day the urine began to change, to diminish in quantity, and to show some signs which presaged concoction. The night, as usual, was restless, except towards morning. The breathing, which was always short, was more easy and longer; the headache less; the buzzing in the ears which had lasted (though unequally) from the beginning to the end, the shiverings the same. In this state juleps with behazar, unicorn, pearls, bone of stag's heart, &c., were continued.

“The following day the access came with slight shiverings, which afterwards were not felt, and from this hour the fever was always continued with remarkable remissions and increases each day, very unequal, the one great, the other less. During this continued fever the tongue became black, the thirst increased, and the tremblings and the buzzings.

“At the end of the fifth, nature endeavoured to accomplish something by the belly, but little; the urine in no way indicated the severity of the disease. Dr. Butler was called in, who only advises internal and external cordials and analeptics, and approved of the diet ordered, and his advice was followed. The night was very unquiet, and the morning as usual a little less restless. The sixth day, the bowels having been washed with result by a clyster in the morning, at 3 p.m. there set in the least increase, during which the face was very red, the respiration short, the pulse full and rapid.

“In the access the nose began to bleed, but after two ounces the blood stopped, not without some relief. This bleeding to a less degree occurred on the seventh and eighth day. From this time bleeding was proposed, to which nature seemed to invite by this effort, in a fever henceforth continued, in an extreme fulness in a temperament excessively warm, and in a subject accustomed to bleed from the nose and deprived of this benefit for several months.

“Nevertheless the seventh passed, and the majority of the physicians were of opinion that the crises ought to be waited for although the disease had increased, and that there was still no appearance of it (the crises). Thus this day the great

reduplication came with more sweating, even when the patient was awake. Blackness, dryness, and moulding of the edges of the tongue, ulceration of the throat, buzzings and tremblings greater. The urine increased in quantity, and there was a terrible restlessness which lasted all night. The increase of the illness and the fact that nature began to decline caused bleeding to be most strongly urged as the sole remedy to save his Highness, if kept within due quantity, and even repeated if need was. As all sorts of appearances were found in regard to the constitution of the body, to the age, to the forces, to the disease, and to the accidents, after a very great discussion at last the three doctors, Mayerne, Hammon, Butler, came to an agreement the eighth day after his Highness had taken to bed, and in their presence from the median of the right arm were taken 7 to 8 oz. of blood. His Highness bore bravely this blood-letting, wished that more had been taken, and had no feebleness. The blood flowed in a good stream, and almost at once some relief was obvious. The blood when cool was seen by any one who wished, all fluid blue below, and almost without fibres, and clotting with difficulty.

“ Throughout his disease his Highness was never so well as on this day and had no increase, so that it seemed as if his pulse was about to come out of the febrile state. The tremblings and buzzings were less, the night better, although disturbed, the urine and the discharges more formed, the thirst a little diminished, and the eyes better able to bear the light.

“ The 9th day the great increase returned, a little less in heat than up to the 7th day. In this access the respiration became shorter, the pulse more frequent, the face redder, the tongue blacker, and the thirst greater, the tremblings continued, and the sighing began; in short, everything made it obvious that the blood and the humours were thrown with abundance and violence towards the brain.

“ This night came on great sweating and wandering talk. His Highness cast himself out of bed, asked for his clothes, and talked of walking out.

“ In the morning Dr. Atkins¹ was sent by the King to the Prince, who bore his coming with impatience till he was persuaded by the other physicians that he stood in need of help from every kind of good counsel, and that the number of learned men could not but be useful and likely to lead to the recovery of his Highness.

“ The aforesaid Dr. Atkins stated before his Majesty and before the Lords of the Council that this disease was a putrid

¹ President of the College of Physicians in 1618.

fever, of which the focus was below the liver in the primæ viæ, and recognised the malignity which accompanied it to proceed from the rottenness which, being in a sovereign degree, held the place of poison.

“The 10th, all the accidents increased, and the tremblings passed into convulsions, the sweating being greater and the sighing worse with the fever, which, with all the other ills, grew worse towards the evening. In the morning bleeding was proposed, which being disapproved by the majority, more powerful cordials and a clyster were tried, by which was driven out a quantity of fluid ill-smelling matter, and his Highness discharged stones of grapes which he had eaten ten or twelve days before.

“All was without effect, and the night of this day his Highness began (the fever being augmented) to sweat more than ever and to toss himself hither and thither; he wished to leap out of bed, singing when asleep and plucking his bedclothes.

“The convulsions with which from the 5th day the sweating had been accompanied were more violent, the tongue, although like all the throat dry and black, did not incite his Highness to ask for a drink: a certain sign that the seat of reason suffered greatly. At last, during all the 11th all went from bad to worse (notwithstanding a very slight remission), and the most part of the council of consultation was of opinion that the crisis ought to be awaited, although postponed and without appearance.

“The night of the 10th, cupping-glasses with scarification were applied to the shoulders and pigeons on his shaved head.

“The 11th, a cock split by the back, and the cordials were doubled in number and quantity, all without any profit.

“Then the danger appeared indubitable which had been long predicted. To obviate which, as far as the art would allow and the condition of the disease seemed to call for it, the 12th morning, the doctors, Mayerne, Hammon, Atkins, and Butler, were driven yet again to blood-letting. Some among them suggesting that the blood being cast violently in the opposite direction and filling the brain, caused acrimony by its malignity, and by the quantity the sweats and convulsions, always without pain, because the spirit was troubled.

“Which accidents placed his Highness in imminent danger more than the sighing, the cause of which was in the ventricles, as the above-mentioned blood, warm and bilious, to the membranes. And as by consequence there was no more immediate remedy than to open the vein, which the forces seemed not to contra-indicate, for the pulse was sufficiently strong, and as his Highness arose to go to the chaise percée, and there remained a long time without any feebleness, which he had not done since

the beginning of his illness. The rest of the council did not find this advice good, and wished to go on to double and treble the cordials and to make revulsion from the brain with a clyster, which acted very well, but without other effect except that his Highness came to himself and heard with attention and understanding the exhortations and prayers of my Lord the Archbishop of Canterbury, showing excellent signs of piety and contempt of this world, and a great readiness to prepare himself to go to enjoy everlasting rest. After that he slept tolerably quietly for three hours, the convulsions and sweats being less.

“In the evening, besides the above-mentioned doctors, the Drs. Gifford¹ and Palmer² were introduced. All together held consultation, at which some having said that they recognised the plague in this illness (though not one of those who drew in a thousand times the breath of his Royal Highness, and continually watched about him felt at all the worse, and though, further, in all his illness he never had any affection of the heart, vomiting, nor any stroke of purple on his body), the others having denied this altogether, and having again insisted on the great need of bleeding, of which the opportunity had long since gone by on account of the evacuation of the belly. At last, by a majority of voices, the diascordium was decided on in presence of Sir Thomas Challoner, chamberlain of his late Royal Highness, who, among others, a most worthy servant of his master, had continually assisted him and was present at most of the consultations with Sir David Murray, first gentlemen of the chamber and master of the wardrobe, whose faithfulness and zeal are known to all the world. The account of the aforesaid consultations can be testified by these two personages of honour, and confirmed by their voice and that of all the officers and gentlemen of his Highness, who were witnesses of all.

“According to the conclusion taken at 10 p.m. the diascordium was given, tempered with less warm cordials. Its operation was slight, and his Highness rested with his usual symptoms.

“After four hours the spine of his back, his shoulders, and arms, with his tongue, suffered frequent convulsions. The sweating increased. His Highness passed his motions under him in the bed, and death seemed to be very near. In this despair everyone hastened to check this inexpressible loss, and each in the abundance of his affection proposed whatever he thought might do good. The doctors (after their prognostic, of which they saw but too clearly the truth) never gave way so far as to give his Highness any substance of which they did not know the pre-

¹ Probably John Gifford, President of the College in 1628.

² M.D., Christ's College, Cambridge.

paration or the composition. At last, by common advice of all six, a cordial was given to his Highness, which had its effect in lessening the convulsions and in making him sweat copiously. But all in vain, so that this very illustrious prince, praiseworthy in all his qualities, having received no relief from this evacuation, the council of physicians, seeing nature conquered and art not having power to succour her sufficiently, left the rest in the hands of God, to the Majesty which it pleased to call this illustrious and heroic soul, taking it from this low world softly and with all the piety one could wish to observe in a Christian, to lodge him in His paradise, to live there for ever.

“Which took place at 8 o'clock in the evening, on Friday, November 6th, 1612.

“This is the simple truth of the whole history of this fatal misfortune.”

Such is the full account of Sir Theodore Mayerne. Before proceeding to his description of the post-mortem examination it will be worth while to examine the symptoms recorded.

The physicians seem to have avoided a precise diagnosis.

In a preface to his ‘Latin Notes’ Mayerne says that many others in the summer of 1612 had a similar fever. It usually began like a tertian, but soon became a continued fever. In those who did not die it lasted a long time. Delirium, stupor, and convulsions often occurred. Hæmorrhage sometimes ended the case. There were spots like fleabites in many cases. The disease was not contagious, nor did one infect another, but sometimes many were sick at the same time in one house.

Some physicians said they had never seen the same kind of fever before, and called it the new disease. “*Medici errori plebeculæ faventes hunc affectum the new disease novum morbum appellavere.*”¹

In this account of the epidemic, typhoid fever seems to me indicated for the following reasons:

- (1.) The fever began gradually with intermissions.
- (2.) After a time it became continued.
- (3.) It lasted a long time.
- (4.) There was an active delirium.
- (5.) There was an exanthem of small red spots.
- (6.) The fever was not obviously contagious or infectious, though people living in the same house had it together.

I shall return to the discussion of the nature of the epidemic to which Prince Henry fell a victim after reducing Sir Theodore’s prolix notes to a more concise statement.

In this abstract I have substituted modern for obsolete medical expressions.

¹ Mayerne, Opera, p. 116.

SUMMARY OF THE CASE.

- October 10th, 1612.—Began to be feverish.
- October 12th.—Bowels opened twenty-five times after clyster.
 He felt better, but lassitude and headache continued.
 Bowels opened five times after a purgative pill.
 He kept his bed.
 Nights restless, with throwing about of limbs.
 Eyes dull, hollow. Face pale; lips dry. Slight sordes upon lips.
- October 24th.—Got up and took exercise.
 Became worse.
- October 25th.—Heard prayers.
 Dined with his father.
 Ate grapes. Had almost facies hippocratica.
 At 3 p.m. slight faintness.
 A rigor.
 Pulse febrile.
 Face red.
 Abdomen tense.
 Great thirst.
 Tongue white, dry in the middle.
 Lips dry and black.
 Night restless.
- October 26th.—Subsultus tendinum most obvious in arms.
 Five yellow fluid stools after clyster.
 He got up and dined, playing afterwards with his brother.
 Countenance greatly depressed.
 Night restless.
 Respirations frequent: short inspiration; longer expiration.
- October 27th.—Symptoms as before.
 Temperature rose at 3 p.m. and began to sink again at about 8 p.m.
 Temperature normal at 10 p.m.
 Rumbling in abdomen.
 Abdomen more tense.
 Buzzing in ears.
 Slept a little towards morning.
 He was not sick; “sed [natura] per inferiora semper sublevata fuisset.”
- October 28th.—Therefore a purge; senna and rhubarb.
 Nine bilious, fluid, fœtid motions.
 Tongue more dry.
 Night restless. Subsultus as before.
- October 29th.—From this temperature continuously raised, not always equally high, but never normal.

- Thirst, lips, tongue, tinnitus, &c., as before.
Restless night.
- October 30th.—Clyster in morning.
Bled from nose ʒij.
Fever greatest at night.
Slight perspiration.
- October 31st.—No better; delirious.
Forehead moist.
Tongue black and fissured.
Night very restless.
- November 1st.—Bled to ʒviij. Better.
Night restless.
Stools fluid.
- November 2nd.—More somnolent.
Subsultus as before.
Bilious, watery, foetid stools.
Jactitations at night.
Rambling talk.
Tried to get out of bed.
Said he would go out.
- November 3rd.—Clyster of senna.
Grape stones and skins in stools.
Somnolent and delirious.
Fever greater at night.
- November 4th.—All symptoms worse.
He sang in his sleep; got up; plucked the bedclothes, and drew the quilt towards himself.
At night the subsultus became convulsive.
Pulse swift.
Very restless night.
- November 5th.—Got out of bed and sat on night-chair without fainting.
Seemed to have some strength left.
Towards evening greater delirium; violent convulsive movements. Some hard masses in stools, such as Sir Theodore Mayerne had often observed to return a little before death.
Slept four hours.
At night jumped out of bed after a convulsive movement of the back; babbled; bowels opened three times.
Slight cough due to catarrh.
- November 6th.—Obviously dying.
Delirium and convulsive movements ceased; copious cold sweat.
Sinking pulse, and so died gradually and quietly.
Mayerne's notes show him to have been a good observer, and

in careful record of detail far superior to any mediæval physician. I have omitted his comments and theoretical explanations of the symptoms, but his Latin note on the Prince's death is too curious to be left out. It shows that three hundred years had not changed everything in medicine, and that, like the Doctour of Physik in the 'Canterbury Tales,' "he was grounded in astronomye."

"Hora octava. in maris fluxu (Plurimi hoc signum viderunt E. C. domestici et alii) Luna admodum debili, placide et pie.

In Christo obdormivit. Vesperi. Quarto morbidie, Horæ septimæ Pomeridiana, mihi noctu ex ejus Arce domum redeunti Cælum ad orientem serenum cum Luna splendente apparuit. Ad occidentem tectum Nube atra cum Pluvia. Iris a duplex erat in Nube, majoris et manifestioris, altera extremitas desinebat in Conclave, in quo E. C. mortua est. Altera erat in Campis. Iri altera erat veluti Rudimentum obscurius ut sæpe interdum a concavæ Nubis figura videre est."

It will be seen that these notes add to the six points already urged in favour of the disease having been typhoid fever.

The fever began gradually, and at first, as in so many cases of unrecognised typhoid, the patient makes himself worse by trying to move about. The whole character of the onset is that of typhoid fever. The same is true of the active form which the delirium takes. The account of the intestinal discharges is consistent with typhoid, but is obscured by the numerous purgative remedies given on purely theoretical grounds. The temperature, highest at night, sank towards morning. The abdomen was tense. The Prince died not later than the 27th day, perhaps earlier. He died exhausted. As to the sweating, which is described as greater than we are accustomed to see it, it must be remembered that we keep the windows open, while before Sydenham they were kept shut in the sick-room.

The precise anatomical appearances connected with typhoid fever are due to observation in very recent times, so we cannot expect to find ulcers of the ileum described, but the post-mortem is nevertheless important.

The post-mortem was made at 5 p.m. on the following day by the surgeons of the King and of the Prince, in the presence of the Elector Palatine and of many members of the Court. I shall give the account of the post-mortem in a tabular form, using the Latin account¹ as the more accurate, and omitting no appearance described.

¹ The document in the Record Office State Papers, vol. lxxi, 29, differs in a few words only from that in Mayerne's works. It ends: "In quorum fidem

Skin.—Pale; no marks of injury. Some patches of redness about the loins, hips, and back of thighs, from his long lying on his back.

Abdomen.—Distended: subsiding on a small puncture being made at the umbilicus.

Stomach.—Healthy; quite natural.

Intestines.—Distended with air, otherwise not abnormal.

Liver.—Paler than natural; on its anterior and upper surface marked with dots, and on its inferior surface with black lines.

Gall bladder.—Empty.

Spleen.—Of a dark colour above and below; much distended with dark blood.

Kidneys.—Natural.

Diaphragm.—Below the pericardium (which contained less fluid than natural) stained with black.

Lungs.—Very dark in colour, and here and there spotted with black. Full of dark blood and blood-stained serum, which flowed out on section.

Heart.—Natural.

Brain.—The posterior cerebral sinuses distended with blood.

Ita sese habentibus præsens Testimonium Quibus.

Veritati consentaneum nostro confirmavimus Chirographo ipso Sectionis die, qui fuit Mensis præscripti septimus.

THE. MAYERNE, Reg. Medicus Primarius.

HAMMON, Medicus Ordinarius Principis.

BUTTLER.

ATKINS, Medicus Regius.

GIFFORD, } Medici Londinenses.
PALMER, }

Of these appearances the majority are due to post-mortem changes; the staining of the liver, spleen, and diaphragm from the escape of gaseous contents of the intestine through the peritoneum; the engorgement of the veins at the back of the head is an appearance of the same kind. The lungs were engorged and œdematous, as they are to be seen in patients with dorsal decubitus. Two appearances due to fever are, however, described—the enlarged spleen and the dry pericardium. There is nothing in the post mortem against the hypothesis of typhoid fever; no description pointing to pneumonia, pleurisy, pericarditis, or tuberculosis, the only diseases associated with fever which at the Prince's age suggest themselves.

præsentem relationem subsignavimus septimo Novembris, 1612. T. Maierne, Hen. Atkins, Jo. Hammond, Rich. Palmer, Jo. Gifford, William Boteler."

The description, meagre as it is, from the point of view of morbid anatomy, is clearly that of the autopsy on a case of epidemic fever. The distension of the abdomen and of the intestines is positive, though not conclusive, evidence in favour of typhoid fever. That the enlargement and ulceration of the Peyer's patches in the ileum, now known to be characteristic of typhoid fever, are not described, is no more than to say that the morbid anatomy of typhoid fever was then unknown. What distinctive lesion is described at this day in a case of tetanus or of diabetes? I may add that I think it probable that the intestines were not opened. That the heart was exposed in the pericardium, but not itself opened, I gather from the following passage in the French account of the autopsy, an account containing the facts of the Latin note with explanations for the general public :

“En faisant laquelle et couppant le Pericarde, pour monstrier le Cœur, le chirurgien par mesgarde, ayant couppé le tronc de la grosse Veine, la plus grande partie du Sang se vuida, dans le Thorax laissant les Veines inferieures vuides, dont la compagnie fut advertie sur le champ.”

Returning to the account of the illness, the Prince's was one case of the epidemic fever of 1612. Of the epidemic fevers known then, which could it have been? Smallpox and measles were well known to the physicians of 1612. Dysentery was also recognised in those days, and no one thought the epidemic was the flux, a term in which dysentery was then included. The case does not run the course of scarlet fever. Typhus and typhoid fever remain, and typhus seems to me excluded by many symptoms, but chiefly by the gradual and not sudden onset. The diagnosis of typhoid fever is the only one which is consistent with an epidemic fever attacking several in one house, but not contagious and not obviously infectious, gradual in its onset, long in its course, with a temperature high at night, and lower in the morning, with an active delirium, with subsultus tendinum, with looseness of the bowels, with a distended abdomen, distended intestines, and an enlarged spleen. Taken together—and if not positively confirmed, at least in no way contradicted, by the appearances after death—the symptoms prove Prince Henry to have died of typhoid fever; and it is due to the accurate observation of Sir Theodore Mayerne that his name should be in future remembered as the exact describer of the earliest case of typhoid fever on record in England.

PUBLICATIONS ON MORBID ANATOMY

BY DR. NORMAN MOORE.

Observations on the Shape of the Chest in Cases of Hypertrophy of the Heart	<i>London, 1873.</i>
Two Examples of Malformation of the Heart	<i>St. B. H. Reports, 1875.</i>
Examples of Malformation of the Heart	" 1876.
Case of Poisoning by Sulphuric Acid	<i>Trans. Path. Soc. of Lond., 1879.</i>
Rupture of Aorta within Pericardium	" " "
Cases of Abscess of Liver	" " "
Cases of Sclerosis of the Cerebral Cortex of Cerebro-spinal Meningitis and of Acute Hydrocephalus	<i>St. B. H. Reports, 1879.</i>
On two Roman Tombs and their Contents	<i>Lond. and Mid. Arch. Soc., 1879</i>
Cases of Hæmorrhage within the Cranium	<i>St. B. H. Reports, 1880.</i>
Aneurysm of Aorta opening into Right Auricle	<i>Trans. Path. Soc. of Lond., 1880.</i>
Aneurysm of Mitral Valve	" " "
Ulcerations of Stomach and Duodenum	" " "
Primary Cancer of Gall-bladder	" " "
Horse-shoe Kidney	" " "
Cases of Diseases of Skull-cap	" " "
Disease of Supra-renal Capsules	" " "
Cancer of the Pancreas	<i>St. B. H. Reports, 1881.</i>
Case of Stenosis of Tricuspid Valve	" "
A Historical Case of Typhoid Fever	" "
Tumour of Optic Tract, from a Case of Dia- betes Insipidus	<i>Trans. Path. Soc. of Lond., 1881.</i>
Pyocephalus	" " "
Dilatation of Central Canal of Spinal Cord	" " "
Primary Cancer of Lung	" " "
Ulcer of Bronchus penetrating the Pulmonary Artery	" " "
Malformation of the Heart	" " "
Morbid Appearance of Blood in Diabetes	" " "
Abscess of Liver in a Child	" " "
Cirrhosis of Liver in a Child	" " "
Calcified Tumour	" " "
Cases of Gout	" " 1882.
Varieties in Structure of Alimentary Canal	" " "
Fatal Cases of Typhoid Fever	" " "
Cases of Abscess of Pancreas	" " "
Primary Cancer of Kidney	" " "
Calculus in Ureter	" " "

