

# Plague Epidemic in Sumerian Empire, Mesopotamia, 4000 years ago

Amjad Daoud Niazi

## ABSTRACT:

This research work concerns the realization and verification that an epidemic of plague had in reality occurred 4000 years ago in Sumer, present day Iraq, that affected the population in a catastrophic way and had led to the decline and fall of the Sumerian Empire. This important conclusion came after verifying the translations and transliterations of thousands of clay tablets which was made available by scholars and international academic agencies. Of course there was no mention clearly of the disease as we know now but there was a clear description of various aspects of the disease including signs and symptoms, epidemic occurrence and effects on the people and propagation through place over time which may have reached a pandemic proportions. It was concluded that such an epidemic could be the main factor in the declining of the Sumerian Empire. The epidemic itself could be a ring in the chain of plague epidemics propagated through place in history and known nowadays as the black death,

**KEY WORDS:** sumerian, plague, epidemic, iraq, mesopotamia, black death

## MATERIALS AND METHODS:

Translation and Transliteration of thousands of clay tablets made available by International Academic Agencies like All Mesopotamia <http://allmesopotamia.wordpress.com/>, The ETCSL project, Faculty of Oriental Studies, University of Oxford<sup>(1)</sup>, All Mesopotamia<sup>(2)</sup>, Sumerian Shakespeare<sup>(3)</sup>; and many other Sumerian sites were revised and studied carefully looking into health factors that were part of and leading to the decline of the Sumerian Empire focusing on the occurrence of an epidemic of plague 4000 years ago in Sumer, Iraq. The study covered many aspects of the disease including origin, occurrence morbidity mortality epidemic proportions of the disease propagation and its outcome effects on the population of such an epidemic.

Results: We are dealing here with the fall of the Sumerian Empire at 1900 B.C., that is around 4000 years ago and our reference literature are mostly the translated and transliterated clay tablets written in cuneiform writings at that time and recovered and translated recently, we are going to bring evidences from this literature in this case the thousands of clay tablets that were translated and transliterated and discuss them. It is a known fact that Civilizations and Empires in history and even today has a limited life span

beginning and flourishing until it reaches to the top possible and then begins to decline and end. Evidence on this is shown in the following quotation as follows:

(A quote from the lament of Sumer and Urim ETCSL translation: t.2,2,3<sup>(1)</sup> "From time immemorial, since the Land was founded, until people multiplied, who has ever seen a reign of kingship that would take precedence forever? The reign of its kingship had been long indeed but had to exhaust itself. O my Nanna, do not exert yourself in vain, abandon your city." End of quote of god Enlil to his son Nanna who was the shepherd and lord of Ur.

(Another quote from the lament of Sumer and Urim ETCSL translation: t.2,2,3<sup>(1)</sup> On the same

## SUBJECT :

Beginning of quote: Its fate cannot be changed. Who can overturn it? It is the command of An and Enlil. Who can oppose it?(end of quote)

This all is supposedly happened when the Elamites from Zagros mountains attacked Sumer 1900 B.C., this is according to the Timeline for Mesopotamia by N.S.Gill, about.com guide<sup>(4)</sup>

And it is known that associated with the declining and leading to it are certain known at the time factors like famines, droughts, wars and unrest. In addition to that there were unknown factors at the time concerning occurrence of disease and epidemics leading to ill health and epidemics.

Emeritus Professor in Community Medicine  
Consultant Epidemiologist.

The known factors are recorded very well and clearly as in the case of wars and famines but for the unknown factors to them they will blame supernatural powers for their occurrences, and relate causes to be from above denoting from heaven and they may picture the causes as clouds for instance, or as evil winds or storms or floods. Those unknown factors to them could be related to epidemics affecting the whole population with high morbidity and mortality which occurs relatively suddenly with great impact on the population paralyzing the life of the Empire. This clearly apply to epidemics like plague influenza or cholera and which are at that time unknown to them and so heavenly attributed according to their beliefs.

In this piece of research we tried to highlight evidence collected directly from the literature which is in this case the clay tablets translated by highly specialized people in well known scientific establishments as referred to in the references.

The effect of this unknown factor had a multiple outcomes affecting the whole community and their day to day life including many aspects which is clear that the disaster is common to all and not restricted to incidents concerning one man or a family or a location which characterize epidemics of cholera which is water and food borne and is limited in extent, but in this case the situation could be explained to be due to the sudden occurrence of a large epidemic of plague the description of which fulfils the effects of that occurrence which is general in nature and catastrophic taking time to develop and spread in different stages of the disease, unlike influenza epidemics which are more limited in time , all described in details in this literature . Like for instance :

(A quote from the lament of Sumer and Urim ETCSLtranslation : t.۲,۲,۳<sup>(۱)</sup> Beginning of quote: that on the two parallel banks of the Tigris and of the Euphrates bad weeds should grow, that no one should set out on the road, that no one should seek out the highway, that the city and its settled surroundings should be razed to ruins; that its numerous black-headed people should be slaughtered; that the hoe should not attack the fertile fields, that seed should not be planted in the ground, that the melody of the cowherds' songs should not resound in the open country, that butter and cheese should not be made in the cattle-pen, that dung should not be

stacked on the ground, that the shepherd should not enclose the

sacred sheepfold with a fence, that the song of the churning should not resound in the sheepfold;(end of quote)

Which shows the effect of the epidemic on the life of the people and animals specially vertebrate animals is so clear in this description of the disease , that it developed in time long enough to have such a disastrous effects on the people and their environment . This could be due to direct or indirect effects on the life of human beings and some animals, eventually affecting the environment and general life of the population Maxcy-Rosenau Preventive Medicine and Public<sup>(۲)</sup>.

This is also evident from the following quotation describing the disastrous effect of the epidemic on the general life of the population on their health and on their being, which shows again that the effect is really general including man animals and their environment and on the life of the population in general and that it it built up in time to manifest itself in such a picture.

(Another quote from the lament of Sumer and Urim ETCSLtranslation : t.۲,۲,۳<sup>(۱)</sup> Beginning of quote: to decimate the animals of the open country, to finish off all living things, that the four-legged creatures of Šakkan should lay no more dung on the ground, that the marshes should be so dry as to be full of cracks and have no new seed, that sickly-headed reeds should grow in the reedbeds and come to an end in a stinking morass, that there should be no new growth in the orchards, that it should all collapse by itself -- so as quickly to subdue Urim like a roped ox, to bow its neck to the ground: the great charging wild bull, confident in its own strength, the primeval city of lordship and kingship, built on sacred ground.(end of quote)

Plague may represent a good spectrum of a disease entity which is characterized by the presence of a known enzootic foci in the Zagros mountains which represent a natural focus of the disease and which is known to modern science<sup>(۳)</sup> forming what we call a natural focus of disease Mode of transmission of the disease is that it needs the vector fleas to be transmitted from the rats ( wild or sylvatic type of plague ) to domestic rats, fleas in this case are prevalent vector at our areas

Needs mass mobilization of people like in wars which were prevalent for a long period of time

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between the Sumerian Empires and cities on one hand and the people inhabiting the areas enzootic

with the disease the Elamites on the other hand<sup>(1,2)</sup>

Needs the presence of domestic rats as the civilization depended on the production of large amount of grain which is the best feed for rats

Transporting the disease from these areas through propagation of the disease through rats till it reaches the domestic rats in Sumer and infected through the fleas with the high probability that with persons affected with the bubonic type of plague which occurs in a sporadic way, but the next stage of the disease is the pneumonic type of the disease where it reaches an epidemic proportions of transmission because it will spread by the airborne route which will be very rapid and progressive

A factor that is important in is that the people through droughts and famines have their immunity lowered and because they live their life within cities surrounded by walls so they seem to be epidemiologically as a type of an isolated populations from the point of view of disease epidemics and unexposed to the disease before, rendering them without immunity and completely susceptible to the disease when exposed to

All this will lead to a pandemic of the whole population and region affecting practically everybody regardless of age or gender or location and nearly killing all susceptible and infected aided by a pneumonic form of the disease which spread by airborne route which is uncontrollable and rapidly spreading leading to a complete paralysis of life as shown clearly in the quotations

This epidemic will soon exhaust itself by exhaustion of susceptible of the population coming gradually to a devastating end combined with the other factors leading to the fall of the civilization and empire because it will be an easy prey for the enemy

Evidence is collected through reference of the literature to the signs and symptoms of the disease

A quote from the lament of Unug c.2,2,6<sup>(1)</sup> describing the sickness clearly beginning of quote: That one drew nearer. That one settled upon the ground. Why would he withdraw? Who distorted Unug's good sense and deranged its good counsel? Who smashed its good udug deity? Who struck its good lamma deity too? Who desecrated the fearsome radiance which

crowned it? Who brought about mob panic in Unug? Who ..... sickness too? Along with the city, the foreign lands ....., who ..... in the

temple of Unug? That one ..... small no. of lines missing

This clarified that there was a kind of a sickness attacking and that nobody can stops

More evidence on signs and symptoms of the disease which is known to us as high fever with lymphadenitis as what we call buboes which is highly infective through their exudates, also a pulmonary and respiratory symptoms when the disease becomes of the pneumonic type

(A quote from the lament of Sumer and Urim ETCSL translation : t.2,2,3<sup>(1)</sup> Beginning of quote: The people, in their fear, breathed only with difficulty. The storm immobilized them, the storm did not let them return. There was no return for them, the storm did not retreat. This is what Enlil, the shepherd of the black-headed people, did: Enlil, to destroy the loyal households, to decimate the loyal men, to put the evil eye on the sons of the loyal men, on the first-born, Enlil then sent down Gutium from the mountains. Their advance was as the flood of Enlil that cannot be withstood. The great wind of the countryside filled the countryside, it advanced before them. The extensive countryside was destroyed, no one moved about there.(end of quote)

Interestingly the quote referred to the mountain and sending down the Gutium people living there and the foci of enzootic plague is known to us in this area<sup>(1)</sup> forming what we call a natural focus of disease and how the disease epidemic advanced before them that could not be stopped

Evidence was clear that the epidemic here referred to as the storm or the cloud or the evil eye or evil wind have propagated through different lands affecting them till it reached Sumer and Ur and it clearly showed the origin of the epidemic as from the mountains where the disease is enzootic affecting man

This shows very clearly the propagation of the epidemic of plague through land progressing from one place to the other until it reached Sumer and Urim and other cities with epidemiologically isolated populations

(Another quote from the lament of Sumer and Urim ETCSL translation : t.2,2,3<sup>(1)</sup>

Beginning of quote: Enlil threw open the door of the grand gate to the wind. In Urim no one went to fetch food, no one went to fetch water. Its people rushed around like water being poured

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from a well. Their strength ebbed away, they could not even go on their way. Enlil afflicted the city with an evil famine. He afflicted the city

with that which destroys cities, that which destroys houses. He afflicted the city with that which cannot be withstood with weapons. He afflicted the city with dissatisfaction and treachery. In Urim, which was like a solitary reed, there was not even fear. Its people, like fish being grabbed in a pond, sought to escape. Its young and old lay spread about, no one could rise. (end of quote).

And where do we find more exact description of the disease plague and its effects, people lived in panic from the deadly effect of the disease no one was able to carry out the usual chores of daily life as everybody was affected by the disease paralyzed by the symptoms of the disease which is caused by fever lethargy bubonic manifestations in addition to respiratory distress and death, and the only thing at that time to confront problems with are their weapons, and this in the quote was worthless and not effective, the building up of the epidemic occurrence made the people paralyzed and due to the high morbidity and mortality they were like fish in a pond can do practically nothing except to succumb to their fate

Even describing the faces of people afflicted with the catastrophe, contorted people's faces which could be due to painful buboes or high fever, septicemia or even convulsions due to the high fever or it could be due to respiratory distress characterizing the disease plague

(Another quote from the lament of Sumer and Urim ETCSLtranslation : t.2,2,3<sup>(1)</sup> beginning of quote: In the city, those who had not been felled by weapons succumbed to hunger. Hunger filled the city like water, it would not cease. This hunger contorted people's faces, twisted their muscles. Its people were as if drowning in a pond, they gasped for breath. Its king breathed heavily in his own palace. Its people dropped their weapons, their weapons hit the ground. They struck their necks with their hands and cried. They sought counsel with each other, they searched for clarification: "Alas, what can we say about it? What more can we add to it? How long until we are finished off by this catastrophe? Inside Urim there is death, outside it there is death. Inside it we are to be finished off by famine.(end of quote)

Description of the signs and symptoms of plague describing the people as drowning related to the

effects of the disease specially the respiratory effects and pneumonia they gasped for breath, the king breathed heavily referring to the king as

the utmost effect meaning nobody was excluded from the epidemic king or commons

The effect was reported through many cities of Sumer at the same time period denoting a pandemic affecting the whole area of the Emire and its cities including Ur, Eridug, Nibru, Unug and others

A quote from the lament of Eridug c.2,2,6<sup>(1)</sup> about symptoms of the disease

Beginning of quote: The minister Isimud ..... Strangers to the house ..... its side. Eridug, the shrine Abzu, ..... silently. The enemy ..... cleansed in a magnificent robe. .... a man ..... the people ..... Along with the fluids spilled from his guts, his blood spilled forth. The ....., which like the azure sky was embellished forever, ..... gasped .....(end of quote)

Epidemics of plagues are recorded in recent history as the black death in Europe which the disease have propagated from the East in series of propagating epidemics which could be the explanation that what we are discussing is an essential part of the cycle of propagation of the disease evolving in such epidemics through history. This all confirms that plague had originated and propagated through the Mesopotamia at that time affecting it catastrophically

Another clear evidence from the Lost Book of Enki ( Year 2008<sup>(2)</sup>)

clearly referring to the airborne pneumonic type of plague affecting the respiratory tract and spreading by breath and air was the cause of the calamity which Sumer was exposed to and affected the Empire and its civilization

Beginning of quote: An evil wind, A storm born in a distant plain, A great calamity wrought in its path A death dealing wind borne in the west its way to the east has made, its course set by fate A storm devouring as the deluge By wind and not by water, a destroyer, By poisoned air, non tidal waves, overwhelming end of quote

Evidence was clear that the epidemic here referred to as the storm or the cloud or the evil eye or evil wind have propagated through different lands affecting them till it reached Sumer and Ur and the other Sumerian cities

(Quote from the lament of Sumer and Urim ETCSLtranslation : t.2,2,3<sup>(1)</sup> Beginning of quote: O bitter storm, retreat, O storm, storm return to your home. O storm that destroys cities,

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retreat, O storm, storm return to your home. O storm that destroys houses, retreat, O storm, storm return to your home. Indeed the storm that blew on Sumer,

blew also on the foreign lands. Indeed the storm that blew on the land, blew on the foreign lands. It has blown on Tidnum, it has blown on the foreign lands. It has blown on Gutium, it has blown on the foreign lands. It has blown on Anšan, it has blown on the foreign lands. It levelled Anšan like a blowing evil wind. Famine has overwhelmed the evildoer; those people will have to submit.(end of quote)

Clearly shows that the epidemic was affecting all the area and that it was propagating towards Sumer

At the end of the epidemic it seems that it was retreating and coming to an end like any epidemic in history as it affected all susceptible and exhausted them

(Quote from the lament of Sumer and Urim ETCSLtranslation : t.𒌦,𒌦,𒌦 (1) beginning of quote: That the orchards should bear syrup and grapes, that the high plain should bear the mašgurum tree, that there should be long life in the palace, that the sea should bring forth every abundance: may An not change it. The land densely populated from south to uplands: may An not change it. May An and Enlil not change it, may An not change it. May Enki and Ninmah not change it, may An not change it. That cities should be rebuilt, that people should be numerous, that in the whole universe the people should be cared for; O Nanna, your kingship is sweet, return to your place. May a good abundant reign be long-lasting in Urim. Let its people lie down in safe pastures, let them reproduce. O mankind ....., princess overcome by lamentation and crying! O Nanna! O your city! O your house! O your people! (end of quote)

Announcing and praying for the epidemic to come to an end and life be restored to the cities again

We note very clearly that here the quotes are not describing war but an epidemic and its declining after effect through purifying water and sanctify the food signifying control of their environment which probably relates to getting rid of the causative factors of the epidemic of plague

(Quote from the lament of Nibru, ETCSLtranslation : c.𒌦,𒌦,𒌦 (1) beginning of quote: He has established there dining in joy within! Enlil has given the command to Išme-Dagan, his joyous, reverent sacral officiant, who

daily serves, to sanctify its food, to purify its water! He has commanded him to purify its defiled divine powers! He has put in order its disordered and scattered rites, he has put back in their place the

most sacred things, neglected and defiled. He decrees as a fate the offering of daily rations and the grinding up of fine meal and flour. He has decided to make bread plentiful on the table, to make loaves numerous! (end of quote)

To return to normal life after the epidemic have come to an end directing people to return to their work in agriculture and production of food in their new life

This was an epidemic which in the recent past was very clear about the epidemics of plague throughout history including the black death of Europe

### DISCUSSION:

The Sumerian Empire was struck by many factors causing its decline. Some of these factors are known which we are not going to discuss here like wars, famines, droughts. What we are concerned here are the unknown factors at their time that could lead or assist in leading to such a catastrophe. One of these are the health factor expressed in the occurrence of disease and epidemics that might affect the whole population in a dramatic way in terms of morbidity and that have such an impact on the general life of the population in terms of fatality and mortality on the other hand

Such probable diseases at that time could be cholera, malaria, influenza and plague. For cholera the water system of the Sumerians are known for its abundance and quality due to the running water type of the two rivers Tigris and Euphrates, and if any epidemic have occurred it will be limited to the water supply of the area and it will be of short and limited effects and does not cover all the areas.

As for influenza the epidemic would be comparatively of shorter duration and does not cause the collapse of an Empire in any way.

As for malaria one could assume the disease could be in a condition like when before controlling the disease in southern Iraq in present days and that would be of endemic type of occurrence and if it will assume epidemic proportions it will be seasonal and limited with no such high fatality rate because supposedly all the people have the premonition type of immunity

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This will leave us with the most probable disease causing this huge epidemic namely plague, this we have seen clearly from the signs and symptoms referred to in the literature, from the history of mass mobilization of people to enzootic areas, from the general conditions of

the people which supposedly lowered the immunity of the population due to droughts which occurred all of these leading to propagation of the enzootic from the mountainous area and leading to infection of the domestic rats with the presence of the vector the flea, and then because of the immunity of the general population was lowered due to famines wars and droughts all this lead to infection of human beings and vertebrate animals, the human being themselves isolated in walled cities meaning that they are already susceptible to the disease and that this was their nearly first exposure to the disease. With the stage of the pneumonic plague which is respiratory and spread by air, contaminating the air, and spreading the infection to everybody which lead to a epidemic proportion of the disease affecting all the population and general in nature affecting all the Sumerian cities, influencing the life of the people in terms of morbidity and high case fatality. This is known in recent history that plague propagate in epidemic waves from the natural foci in the mountains in the east towards the west a good example of which is the black death of Europe and this most probably is a ring in this chain of propagation, The epidemic is limited in time after this disastrous effect exhausting all the susceptible.

### CONCLUSION:

An epidemic of plague have occurred 4000 years ago in Sumer and caused the fall of the Empire. This was authenticated by the literature available and included the description of the signs and symptoms of the disease its effect on the people its type of spread and propagation from mountainous areas enzootic with the disease

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