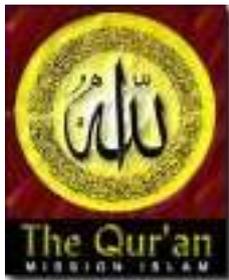


Koran: The Myth of Embryology!

● Scientific errors of medical information on embryology and human development in the mother's womb.

Islam: Truth or Myth?



Scientific errors and the myth of embryology in the Koran:

In an effort to show the scientific accuracy of the Koran, Muslim's are quick to bring up the claim of embryology revealed in stunning accuracy, before man discovered for himself. Muslims love to tell the story of how professor Keith L. Moore, the former anatomist at the University of Toronto, was impressed with the Koran's embryological information.

However many Muslim are completely unaware that all of the information in the Qur'an about embryology had already been revealed many different times, centuries before hand. Furthermore, some of the information is scientifically inaccurate.

But don't take my word for it, early Muslim doctors, like Ibn-Qayyim, were first to blow the whistle when they saw the Koranic material, mirrored a Greek doctor named Galen, who lived of 150 AD. In 1983 Basim Musallam, Director of the Centre of Middle Eastern Studies at the University of Cambridge concluded, "The stages of development which the Qur'an and Hadith established for believers agreed perfectly with Galen's scientific account....There is no doubt that medieval thought appreciated this agreement between the Qur'an and Galen, for Arabic science employed the same Qur'anic terms to describe the Galenic stages" (B. Musallam (Cambridge, 1983) Sex and Society in Islam. p. 54) In other words when it comes to embryology the Qur'an merely echoes the scientific knowledge man had already discovered 450 years earlier.

Samuel ha-Yehudi was a 2nd century Jewish physician, and one of many with an interest in embryology . The embryo was called *peri habbeten* (fruit of the body) and develops as *golem* (formless, rolled-up thing); *shefir meruqqam* (embroidered foetus - *shefir* means amniotic sac); *'ubbar* (something carried); *v'alad* (child); *v'alad shel qayama* (noble or viable child) and *ben she-kallu chadashav* (child whose months have been completed). (J. Needham (Cambridge, 2nd edition 1959) A History of Embryology, p. 77)

J. Needham spent almost 60 pages in his book "A history of embryology", discussing ancient Greek, Indian and Egyptian embryology, than in less than 1 page he dismisses the entire

Arabic tradition by concluding that "Arabic science ... was not of great help to embryology". After listing some of the verses in the Qur'an about embryology he dismisses them as "a seventh-century echo of Aristotle and the Ayer-veda" . (J. Needham (Cambridge, 2nd edition 1959) *A History of Embryology*, p. 82), in other words a mixture of Greek and ancient Indian teachings.

And what about Professor Keith L. Moore, once at the University of Toronto, who Muslims love to quote as a scientist who saw the light of the Koran? If you buy Moore's latest sixth Edition University textbook called "The developing human", he actually directs his readers to read an essay by Basim Musallam, who we just quoted. Who shows that the Koran merely echoes what Greek doctor "Galen" wrote 450 years earlier. It seems Dr. Moore is not as impressed today. (B. Musallam, *The human embryo in Arabic scientific and religious thought*, in, G. R. Dunstan (ed.) (University of Exeter Press, 1990) *The human embryo: Aristotle and the Arabic and European traditions*, pp. 32-46)



Bones Before Muscle? The Koran got it wrong!

Keith L. Moore knows that the Koran is wrong when it says that bones are formed first, then flesh is placed upon them.

"Look further at the bones, how We bring them together and clothe them with flesh ..." (Al-Baqara 2:259)

The Koran gives the impression that first the skeleton is formed, and then it is clothed with muscle. Dr. Bucaille knows perfectly well that this is not true. The **muscles** and the **cartilage precursors of the bones** start forming from the somite at the same time. At the end of the eighth week there are only a few centers of ossification started but the fetus is already capable of some muscular movement.

In a personal letter dated 8/1/87 from Dr. T.W. Sadler, Ph.D., Associate Professor in the Department of Anatomy at the University of North Carolina, Chapel Hill, N.C. 27514, and author of *Langman's Medical Embryology*, Dr. Sadler states,

"At the 8th week post fertilization, the ribs would be cartilaginous and muscles would be present. Also at this time ossification would begin near the angle of the rib and would spread along the shaft until it reached the costal cartilage by the 4th month. Muscles would be capable of some movement at 8 weeks, but by 10-12 weeks this capacity would be much better developed."

It is always better to have two witnesses so we shall see what Dr. Keith L. Moore has to say about the development of bones and muscles in his book *The Developing Human*. Extracted from Chapters 15-17 we find the following information:

The skeletal and muscle system develops from the mesoderm, some of which becomes mesenchymal cells. These mesenchymal cells make muscles, and also have the ability to differentiate...into osteoblasts which make bone. At first the bones form as cartilage models so that by the end of **the sixth week** the whole limb skeleton is formed out of cartilage but without any bony calcium as shown in **Figure 15-13**. (Keith L. Moore, *The Developing Human*, 4th ed., 1988, p. 346.)

While the bone models are forming, myoblasts develop a large muscle mass in each limb bud, separating into extensor and flexor components. **In other words, the limb musculature develops simultaneously in situ from the mesenchyme surrounding the developing bones.** So Dr. Moore agrees completely with Dr. Sadler.

Furthermore, during a personal conversation with Dr. Moore I showed him Dr. Sadler's statement and he agreed that it was absolutely valid.

Conclusion: on bone development Dr. Sadler and Dr. Moore agree. There is no time when calcified bones have been formed and then the muscles are placed around them. The muscles are there several weeks before there are calcified bones, rather than being added around previously formed bones as the Qur'an states. **The Qur'an is in complete error here.**

We are going to examine the historical situation leading up to the time of Muhammad to see what Muhammad and his people believed about embryology. The trail will start with the Greek and Indian medical men.

HIPPOCRATES

We will start with Hippocrates. According to the best evidence, he was born on the Greek island of Cos in 460 BC. His stages are as follows with the references in the text.

Semen

Sperm is a product which comes from the whole body of each parent, weak sperm coming from the weak parts, and strong sperm from the strong parts. Section 8, p 321

Coagulation of Mother's blood

The seed (embryo), then, is contained in a membrane ... Moreover, it grows because of its **mother's blood, which descends to the womb**. For once a woman conceives, she ceases to menstruate... Section 14, p. 326

Flesh

At this stage, with the descent and coagulation of the mother's blood, flesh begins to be formed, with the umbilicus. Section 14, p. 326

Bones

As the flesh grows it is formed into distinct members by breath ... The bones grow hard ... moreover they send out branches like a tree ... Section 17, p. 328

This information is clearly summarized in the following chart.

STAGES OF PRENATAL DEVELOPMENT ACCORDING TO HIPPOCRATES

STAGE 1. sperm

STAGE 2. mother's blood descends around the membrane

STAGE 3. flesh, fed through umbilicus

STAGE 4. bones

Clearly this shows that 1000 years before the Qur'an the development of the embryo was divided into stages.

ARISTOTLE

Next we will look at Aristotle. In his book *On the Generation of Animals*, (Aristotle, *On the Generation of Animals*, Trans. by Arthur Platt, Vol. 9 of Great Books of the Western World, Encyclopædia Britannica, Inc., 1952.) sometime about 350 BC, Aristotle gives his stages of embryology. (The section numbers are in the text.)

Semen and menstrual blood

In this section, 728a, Aristotle speaks of the male semen as being in a pure state ... "It follows that what the female would contribute to the semen of the male would be material for the semen to work upon." In other words the semen clots the menstrual blood.

Then he continues, "Nature forms from the purest material the **flesh** ... and from the residues thereof **bones**, sinews, hair, and also nails ... and lastly, **round about the bones**, and attached to them by thin fibrous bands, **grow the fleshy parts.** ..." 654b

Clearly the Qur'an follows this exactly, sperm clotting the menstrual blood which forms meat. Then the bones are formed and lastly "round about the bones ... grow the fleshy parts" as we see in the following chart.

STAGES OF PRENATAL DEVELOPMENT ACCORDING TO ARISTOTLE

STAGE 1. sperm

STAGE 2. catamenia -- menstrual blood

STAGE 3. flesh

STAGE 4. bones

STAGE 5. around the bones grow the fleshy parts

NEXT WE SHALL CONSIDER INDIAN MEDICINE

The opinion of Charaka (123 AD) and Susruta is that both the male and female contributed seed. The "secretion" of the male is called the *sukra* (semen) ...

The "secretion" of the woman is called *artava* or *sonita* (blood) and it is derived from food by way of blood ..." (Dr. P. Kutumbiah, M.D., F.R.C.P., *Ancient Indian Medicine*, Orient Longmans, Madras, 1969, p. 2-4.)

Here we see that in the medicine of India, they too had the idea that the child was formed from the male semen and the female menstrual blood.

NOW WE SHALL LOOK AT GALEN

Galen was born in 131 AD in Pergamum (modern Bergama in Turkey).

Our knowledge of his book, *De Semine*, depends on two Greek manuscripts of the 15th and 16th century and two Arabic copies from the 12th and 13th century of the same translation made in about 840 AD, i.e. 700 years after Galen lived. Galen's work was considered so important that copies were still being made in 1500 AD. Secondly, although the Arabic copies reflect a translation made 700 years after Galen's life, no one doubts their essential accuracy.

I mention this because in comparison we Christians have 75% of the Greek Gospel-New Testament in papyrus copies from only 150 years after Christ ascended into heaven, and we have 2 complete Greek copies from 350 AD. Therefore, there is no reason to doubt the essential accuracy of the Gospel-New Testament either. It has not been changed.

Galen - On Semen

Galen says, "The substance from which the fetus is formed is not merely menstrual blood, as Aristotle maintained, **but menstrual blood plus the two semens.**" p 50.

The Qur'an agrees with Galen here when it says in Sura 76:2, "We created man from a drop of mingled sperm."

Embryological Development

Concerning Embryological development, Galen also taught that the embryo developed in stages.

He wrote, "the first is that in which ... the form of the semen prevails. At this time Hippocrates too, the all marvelous, ... still calls it **semen** (*geniture*)."

The next stage is "when it has been **filled with blood**, and heart, brain and liver are (still) unarticulated and unshaped ... this is the period ... that Hippocrates (called) *foetus*."

(The Quranic Sura 22:5 reflects this when it says, "... Then out of a morsel of flesh, partly formed and partly unformed ...")

"And now the third period of gestation has come ... Thus it (nature) caused **flesh** to grow on and around all the **bones**."

We saw above that the Qur'an agrees with this in Sura 23:14 where it says, "And we clothed the bones (with) meat."

"The fourth and final period (*puer* or child - verse 9) is at the stage when all the parts in the limbs have been differentiated." (Galen, op.cit. I 9, verses 1-9, p. 92-95.)

GALEN'S STAGES OF PRENATAL DEVELOPMENT

STAGE 1. The two semens

STAGE 1b. plus menstrual blood

STAGE 2. unshaped flesh

STAGE 3. bones

STAGE 3b. flesh grows on and around the bones

Thus we see that Galen also has stages. He divides them differently, but the sequence is the same.

THE XVI BOOKS OF GALEN AS THE BASIS OF MEDICAL STUDIES

Galen was so important in medicine that just about the time of the Hejira, four leading medical men in Alexandria, Egypt decided to form a medical school using 16 books of Galen as the basis of the studies. This continued up to and including the 13th century. (LeClerc, op. cit., p. 41.)

ARABIA AROUND 600 AD, BETWEEN GALEN AND AVICENNA

We must now ask ourselves what the political, economic and medical climate was in Arabia at the time of Muhammad.

From the Hadramaut in Yemen, the caravans of the spice trade passed north through Mecca and Medina and then reached into all of Europe.



In North Arabia in about 500 AD the Ghassanids took over and by 528 AD the Ghassan controlled the Syrian desert to the outskirts of Yathrib (Medina). Syriac (a form of Aramaic, related to Arabic) was their official language.

As early as 463 AD, the Jews translated the Torah and Old Testament from Hebrew into Syriac. (The British Museum has a copy) This made it available to the Ghassan who were Christians and to the Jewish tribes in Arabia for their members who didn't know Hebrew.

During this time, Sergius al-ras Ayni, (died in Constantinople in 536 AD), one of the earliest and greatest translators from Greek into Syriac (Aramaic), translated various works on medicine, **including 26 books of Galen's works** into Syriac. This made them available in the Kingdom of Khosru I and to the Ghassan Tribe whose influence extended to the outskirts of Medina.

Khosru I, (Arabic Kisra) King of Persia from 531-579, was known as Khosru the Great. His troops conquered areas as far away as Yemen. He also loved learning and started several schools.

"The school of Jundi-Shapur became, during Khosru I's long reign of 48 years, the greatest intellectual center of the time. Within its walls Greek, Jewish, Nestorian, Persian and Hindu thought and experience were freely exchanged.

Teaching was done largely in Syriac from Syriac translations of Greek texts." (*The Role of the Nestorians and Muslims in the History of Medicine*, Allen O. Whipple, 1967, Princeton Univ. Press, p. 16.) This meant that Aristotle, Hippocrates, and Galen were readily available when the medical school at Jundi-Shapur was operating during his reign.

The next step was that the conquering Arabs compelled the Nestorians to translate their Syriac texts of Greek medicine into Arabic. The translation from Syriac to Arabic was easy as the two languages had the same grammar.

Concerning the local medical situation during Muhammad's life, we know there were physicians living in Arabia during this period.

Harith ben Kalada was the best-educated physician trained in the healing art. "He was born about the middle of the sixth century, at Ta'if, in the tribe of Banu Tha'qif. He traveled through Yemen and then Persia where he received his education in the medical sciences at the great medical school of Jundi-Shapur and thus was intimately acquainted with the medical teachings of Aristotle, Hippocrates and Galen.

"Having completed his studies he practiced as a physician in Persia and during this time he was called to the court of King Khosru, with whom he had a long conversation. He came back to Arabia about the beginning of Islam and settled down at Ta'if. While there Abu'l-Khayr, a King of Yemen, came to see him, in connection with a certain disease from which he was suffering and, on being cured, rewarded him with much money and a slave girl.

"Though Harith ben Kalada did not write any book on medicine, his views on many medical problems are preserved in his conversation with Khosru. About the eye he says that it is constituted of fat which is the white part, of water which is the black part, and of wind which constituted the eyesight." **All this ... goes to show the acquaintance of Harith with the**

Greek doctors. (Dr. Muhammad Zubayr Siddiqi, *Studies in Arabic and Persian Medical Literature*, Calcutta University, 1959, p. 6-7.) He died in the reign of 'Umar the 2nd Caliph.

Summarizing the situation in a few words in his book *Histoire de la Médecine Arabe*, Dr. Lucien LeClerc writes,

"Harith ben Kalada studied medicine at Jandi-Shapur and Muhammad owed to Harith a part of his medical knowledge. Thus, with the one as well as the other, we easily recognize the traces of Greek (medicine)." (LeClerc, op.cit., p. 123)

"Sometimes Muhammad treated the sick but in the difficult cases he would send the patients to Harith." (LeClerc, op.cit., p. 33.)

Another educated person around Muhammad was Nadr ben Harith--not related to the doctor. He was a Qurayshite and cousin of Muhammad and had also visited the court of Khosru. He had learned Persian and music which he introduced among the Quraish at Mecca.

However, he was not sympathetic to Muhammad, mocking some of the stories in the Qur'an. "Muhammad never forgave him for this, and when he was taken prisoner at the Battle of Badr, he caused him to be put to death." (Edward G. Brown, M.B., F.R.C.P., *Arabian Medicine*, Cambridge, 1921, p. 11.)

In summary, we see that

- (1) Arabs living in Mecca and Medina in 600 AD had political and economic relations with people from Ethiopia, Yemen, Persia, and Byzantium, i.e. present day Turkey.
- (2) A cousin of Muhammad knew Persian well enough to do his musical studies in it.
- (3) The Ghassan tribe, which ruled the Syrian desert over to the gates of Medina, used Syriac--one of the main languages used to teach medicine at Jundi-Shapur--as their official language.
- (4) An ill king of Yemen came to Ta'if to consult the physician Harith ben Kalada who had been trained at Jundi-Shapur--the best medical school in that world--and to whom Muhammad sometimes sent patients.
- (5) During Muhammad's life time a new medical school was established in Alexandria using the XVI books of Galen as their texts.

This all shows that there was ample opportunity for Muhammad and the people around him to have heard of the embryological theories of Aristotle, Hippocrates and Galen when they went to seek treatment from Harith ben Kalada and other local doctors.

Thus when the Qur'an says in the Late Meccan Sura of the Believer (Al-Mu'min) 40:67,

"He it is Who created you from dust, then from a sperm-drop, then from a leech-like clot ('**alaqa**) ... **THAT PERHAPS YOU MAY UNDERSTAND,**"

And when the Sura of the Pilgrimage (Al-Hajj) 22:5 starts out,

"O mankind! if you have doubt about the resurrection (**consider**) that We have created you from dust, then from a drop of seed, then from a clot ('**alaqa**), etc..."

it is correct for us to ask again what were they to understand?

What were they to consider?

When we look at the Quranic stages again the answer is very clear.

QURANIC STAGES OF PRENATAL DEVELOPMENT

STAGE 1. nutfa -- sperm

STAGE 2. 'alaqa -- clot

STAGE 3. mudagha -- piece or lump of flesh

STAGE 4. 'adaam -- bones

STAGE 5. dressing the bones with muscles

They were understanding and considering that which was common knowledge--the embryological stages as taught by the Greek physicians.

I do not mean that Muhammad's listeners all knew the names of the Greek physicians, but they knew the embryological stages of the Greek physicians.

- (1) They believed that the male sperm
- (2) mixed with the female semen and menstrual blood to cause it to clot and this became the baby.
- (3) They believed there was a time when the fetal lump was "formed and unformed".
- (4) They believed the lump became bones
- (5) which were then covered with muscles

Allah in the Qur'an was using that common knowledge as a sign encouraging the listeners and readers to turn to Him. The trouble is that this common knowledge was and is not true.

ARAB PHYSICIANS AFTER MUHAMMAD

We must now look at one hadith and two well-known physicians from the period after Muhammad. Obviously they had no effect on the Qur'an, but they demonstrate that faith in the embryological ideas of Aristotle, Hippocrates and Galen continued among the Arabs right up to the 1600's.

The Hadith is found in the *Forty Hadiths* of An-Nawawi and reads as follows,

This **Hadith** is reported according to Abi 'Abd-ar-rahman 'Abdallah ben Mas'ud, may God be pleased with him, who said: The Apostle of God, may God bless him and grant him salvation, spoke to us and he is truthful and worthy of belief:

"The creation of any one of you is accomplished in various stages in the abdomen of your mother; **40 days a drop of sperm**; then he will be (**'alaqa**) a clot for the same period, then chewed meat (**mudagha**) for the same period; then the angel will be sent to him and he will

blow into him the spirit (soul) and he will order four words (about the future) by writing: his monetary fortune, and his length of life, and his actions, and whether he is to be damned or happy in the hereafter.

"And I swear by God Whom there is no other God except Him: it could be that one of you will do acts as the people of heaven until there remains only one arms length between him and it (heaven), and the writing (of his future) will overtake him and he will do the acts of the people of the fire and he will enter it. And it could be that one of you will do acts of the people of the fire until there remains only one arms length between him and it, and the writing (of his future) will overtake him and he will do the acts of the people of heaven and he will enter it." (translation mine) Transmitted by Bukhari and Muslim. (An-Nawawi, op. cit., p. 28-29.)

We have here a Hadith which is reported to be from the mouth of Muhammad; attested to by the best authorities--Bukhari and Muslim; included in a special collection of Hadiths by a specialist in Hadiths; which has gross scientific errors. It follows the stages of the Qur'an exactly, but here Muhammad has added other information. The drop of sperm remains a drop of sperm 40 days, then an "'alaqa" 40 days for a total of 80 days, then "chewed meat" for 40 days for a total of 120 days as shown in the following summary. Modern gynecological studies have shown that sperm remain alive less than a week inside the female genital tract, and that at 70 days organ differentiation and maturation are well advanced, except for the brain.

HADITH'S STAGES OF PRENATAL DEVELOPMENT

STAGE 1. sperm--for 40 days

STAGE 2. 'alaqa -- clot for 40 days

STAGE 3. mudagha -- flesh for 40 days

This makes a total of 120 days or 3 months and there are still no bones.

In truth all organs are formed, bones are beginning to calcify, and muscles are moving at 2 months.

This **Hadith** says that it doesn't even become "an unformed lump" until 80 days, a clear error. Dr. Bucaille also mentions this Hadith and concludes,

"This description of embryonic evolution does not agree with modern data." (Bucaille, BQ&S, p. 245.)

However, it clearly shows something of what men believed only 200 years away from Muhammad, and it raises severe theological problems in relation to all the Hadith.

THE THEOLOGICAL PROBLEM

Do the scientific errors in this Hadith make the theological statements of Muhammad wrong too?

If the scientific error proves that this well attested Hadith is wrong, how do we know anything about the validity of the other well attested Hadiths which don't happen to have a scientific error to betray that they are wrong?

An even more crucial question is, how do we know that this Hadith is not an accurate transmission? How do we know that this does not represent Muhammad's words and understanding of the scientific facts???

Furthermore, if the correct translation of "alaqa" is "leech-like substance" as modern Muslims like Shabir Ally claim, there is no place where these post-Quranic doctors said so. In fact, it is just the opposite. The ideas of these Greek physicians were being used to explain the Qur'an and the Qur'an was quoted to enlighten the meaning of the Greek physicians.

Avicenna (Ibn Sina) 980-1037 AD wrote,

679. The human being takes its origin from two things---(1) **the male sperm**, which plays the part of "factor"; (2) **the female sperm [first part of the menstrual blood]**, which provides the matter ... These give the **coagulum** ("He created man from a clot"---Q. 96,2) a certain hardness or firmness. (Gruner, op.cit., p. 359.)

Thus we see that "Ibn Sina gave the female semen exactly the same role that Aristotle had assigned to the menstrual blood ... It is difficult to overstate the importance of Ibn Sina as a scientific and philosophical authority for the pre-modern Europeans. (Musallam, Basim F., *Sex and Society in Islam*, Birth control before the 19th century. Cambridge University Press, 1983, p. 47-48.)

Ibn Qayyim Al-Jawziyya (1291-1351)

Ibn Qayyim took full advantage of the agreement between Quranic revelation and Greek medicine.

Here Ibn Qayyim is writing a medical account which includes

Hippocrates (italics),
the Qur'an (bold),
Hadith (bold underlined),
commentaries (plain underlined),
and his own thoughts (in plain)

in one and the same paragraph.

Hippocrates said in the third chapter of Kitab al-ajinna: "... *The semen is contained in a membrane, and it grows because of the blood of its mother which descends to the womb* (This is exactly what we quoted from Hippocrates at the beginning of this section: "The seed (embryo), then, is contained in a membrane ... Moreover, it grows because of its **mother's**

blood, which descends to the womb. **For once a woman conceives, she ceases to menstruate ...** Section 14, p. 326.") ... Some membranes are formed at the beginning, others after the second month, and others in the third month ..." That is why God says, **"He creates you in the wombs of your mothers, by one formation after another in three darknesses" (Qur'an 39:6)**. Since each of these membranes has its own darkness, when God mentioned the stages of creation and transformation from one state to another, He also mentioned the darknesses of the membranes. Most commentators explain: 'it is the darkness of the belly, and the darkness of the womb, and the darkness of the placenta' ...

In a second example we read,

Hippocrates said, "The mouth opens up spontaneously, and the nose and ears are formed from the flesh. The ears are opened, and the eyes, which are filled with a clear liquid." The Prophet used to say, **'I worship Him Who made my face and formed it, and opened my hearing and eyesight' etc. etc.**" (Ibn Qayyim, Tuhfat, p. 248-52.)

He could do this because, as we have seen, the educated people of Muhammad's time were familiar with Greek medicine.

However, what is important for us sitting here today to realize is that **there is no place where the Qur'an corrected Greek medicine**. There is no place where Ibn Qayyim was shouting "Hay you guys. You've got this all wrong. The correct meaning of 'alaqa is "that which clings" or "leech-like substance." On the contrary, Ibn Qayyim was demonstrating the agreement between the Qur'an and Greek medicine--their agreement in error.

A final witness is the commentary of Imam Naasir-addiin Baidawi who died in 1282 AD. He quotes Sura 22:5 and then gives his understanding. He explains 'alaqa as "a piece of solid blood (qata min al-dam jaamida)" and mudagha as "a piece of meat originally as much as can be chewed (qata min al-lahm wa hiya fii al-aasal qadr maa yamdagh) ". (Baidawi's commentary of Sura Al-Hajj 22:1-5, Dar Al-Fikr, P.O. Box 11/7061, Beirut, Lebanon, 1982, p. 439.)

Stages of development - a modern idea?!?

As I mentioned at the beginning of this study, it has been said that the idea of the embryo developing through stages is a modern one, and that the Qur'an is prophesying modern embryology by depicting differing stages. Yet, we have seen that Aristotle, Hippocrates, the Indians and Galen have all discussed stages of embryological development during the 1000 years before the Qur'an.

And after the coming of the Qur'an, the account of the different stages as described by the Qur'an, was carried on in the teachings of the Hadiths, Avicenna and Ibn Qayyim, and is essentially the same as that taught by Galen and those preceding him.

Concerning the bone stage, it is clear, as Dr. Moore demonstrates so capably in his textbook, that muscles start forming from the somites at the same time as the cartilage models of the bones. There is no bone stage at which the limbs of the developing fetus are just bones around which muscles will later be placed.

It is equally clear, that **'alaqa** in the Qur'an means **clot** and that the Quraish who heard Muhammad speaking understood him to be referring to the menstrual blood as the female contribution to the developing baby.

Therefore we can conclude that during all these years, the Quranic verses on embryology saying that "man is created from a drop of sperm which becomes a clot" were in perfect accord with the "science" of the 1st century of the Hejira, of the time of the Qur'an.

But when compared with the modern science of our 20th century,

Hippocrates is in error,

Aristotle is in error,

Galen is in error,

The Qur'an is in error.

They are all in serious error.

(the section above by Dr. William Campbell)



An extraordinary passage from the writings of the medieval philosopher Ibn Qayyim al-Jawziyya shows how heavily the later Arabic writers depended upon the Greek doctors; in one continuous discourse (Ibn Qayyim (Damascus, 1971) Tuhfat: Tuhfat al mawdud bi ahkam al-mawlud, pp. 254-291) the words of Hippocrates explain the Qur'an and Hadith, and the latter are used to explain Hippocrates:

"Here is someone writing a medical account who includes **Hippocrates**, the *Qur'an and Hadith*, commentaries on them and his own thoughts in one and the same paragraph. Of course the intelligentsia of Muhammed's time would have been familiar with both Greek and Indian medicine: "Hippocrates said ... **'some membranes are formed at the beginning, others after the second month, and others in the third month ...'** That is why God says, **'He creates you in the wombs of your mothers, by one formation after another in three darknesses'**. Since each of these membranes has its own darkness, when God mentioned the stages of creation and transformation from one state to another, He also mentioned the darknesses of the membranes. Most commentators explain: **'it is the darkness of the belly, and the darkness of the womb, and the darkness of the placenta'** ... Hippocrates said, **'The ears are opened, and the eyes, which are filled with a clear liquid.'** The Prophet used to say, **'I worship Him Who made my face and formed it, and opened my hearing and eyesight'** etc." (B. Musallam (Cambridge, 1983) Sex and Society in Islam. p. 56).

The Koran says in 16:4 "He has created man from a sperm-drop", but this was understood about 2000 years before the Koran, for the Bible says, "Onan knew that the offspring would not be his; so when he went in to his brother's wife, he wasted his seed on the ground in order not to give offspring to his brother." (Genesis 38:9) That man was created from dust is recorded in Gen 2.

Scientific errors related to embryology are contained in the Koran. In 86:6-7 the Koran says, "He is created from a drop emitted- Proceeding from between the backbone and the ribs". This echoes the scientific error of Hippocrates who believed semen originates from all the fluid in the body, starting from the brain down the spinal chord, before passing through the kidneys and finally the testicles into the penis. (Hippocratic Writings, Penguin Classics, 1983, p. 317)

Written by [Brother Andrew](#)

<http://www.bible.ca/islam/islam-myths-embryology.htm>

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