

QURANIC DESCRIPTION OF GAMETES

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ABSTRACT

There are several important characteristic properties of reproductive fluid. Gametes are the reproductive cells consisting of sperms in males and ovum in females. These cells combine to form Zygote in the process of fertilization. The characters of Gametes have been narrated by Holy Quran in a very well-suited and selected terminology. This paper enumerates various Quranic terms related to gametes, and then discusses their scientific significance.

Introduction :

Gametes are the reproductive cells consisting of sperms in males and ovum in females. These cells combine to form Zygote in the process of fertilization which (i) sparks of embryogenesis, (ii) continues the progeny, (iii) transfers parental characters to offsprings, and (iv) results in chromosomal sex determination.

The above characters of gametes have been narrated by Holy Quran in a very well-suited and selected terminology. This scientific description of gametes by Holy Quran is very surprising in view of the fact that it was revealed during 7th Century A.D., an age of ignorance, when (i) Females were considered as playing a passive role in procreation, (ii) There was no concept of female gametes, (iii) There was no histological, bio-chemical & immunological progress and (iv) there were no scientific principles of genetics.

This paper enumerates various Quranic terms related to gametes, and then discusses their scientific significance.

Quranic Terminology :- There are several interesting words, which have been used by Holy Quran to describe the "reproductive fluid" and "gametes."

1. Nutfah : This word may signify gametes. The literary meanings of this word are "drop of fluid", "Clear fluid" or "Semen."

Quran says : "Does not man know that we have created him from a clear drop" (36:77).

2. Nutfatin - Amshaj : This term may indicate Zygote. Its literary meanings are "mixed fluid" or "coupled fluid". Holy book says: "We created him from a coupled drop" (72:2).

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3. Ma-Im-Maheen : This word indicates high potential of an apparently weak cell. Literary meanings of this word are “weak fluid” or “mean fluid”.

Quran says : “Did not we create you from a weak fluid” (77:20)

4. Maie-Dafiq: This term indicates the process of ejaculation (or ovulation?). Its literary meaning is “gushing fluid”

Almighty says: “He (man) is created from a gushing fluid” (86:6).

5. Mani : This word is used for reproductive fluid. Literally it is used for fluid coming out during intercourse, at its climax.

Quran reminds : “was not he a drop of a fluid deposited” (75:37).

6. Tumna
Yumna
Tumnoon

These words express the process of insemination. The literary meaning is deposition of semen.

Quran narrates :

Discussion :-

1. The word “Nutfah” has been frequently translated as “semen”, though in Arabic it can be used for both male & female reproductive fluids. If we study the verses wherein this word is used, it becomes clear that Koran has never restricted this word only to the semen or male reproductive fluid. It is an interesting and surprising fact that all the features of gametes described by Quran very appropriately qualify both sperms and

ovum, (as described in following sections).

2. “Drop-like quality of nutfah convey the cellular nature of gametes, especially their microscopic appearance. Quran also mentions that these gametes form just a component of whole reproductive fluid.

“was not he a drop (gamete) from a fluid deposited”

3. The “mean or “weak” quality assigned to the reproductive fluid, describes the high potential hidden in apparently minute sperms or ovum. We know that semen contains about 100 million sperms/ml, but only one sperm is utilized for fertilization. Sperms are very small (60 long) and slow (velocity about 3 mm/mit). They contain a very little quantity of DNA of about 6 Micro grams. Similarly at birth, there is a compliment of about 2 million oocytes in a female child, out of which only some 40,000 survive in each ovary at the time of puberty. Only one ovum is discharged at the time of ovulation, and measures aboutIt remains useless if not fertilized by the sperm.

Really how weak are these gametes.

4. “Mixed drop” or “Coupled drop”! This is a beautiful description of zygote, we know that process of fertilization results in the formation of a combined or diploid cell, which is having a drop like appearance. Koran also predicts that this zygote faces various problems during its further development but it overcomes these difficulties by divine guidance.

Quran says: “We have indeed created man out of a coupled semen, we are going to test him. So we have made him hearing, seeing. Verily we have guided him in the path” (76:2-3).

The term coupled fluid can also convey the following biological features of gametes.

a) Semen consists of a mixed population of X & Y containing sperms.

b) The cytoplasm of the ovum contains two major components i.e., formative yolk and nutritive yolk. In mammalian Ova nutritive yolk is uniformly distributed in the cytoplasm (i.e., Isolecithal).

c) Zygote divides into two types of cells, embryogenic & trophoblastic.

5. Quran explains that there is a selected portion or an extract of reproductive fluid which is responsible for the continuation of progeny. We know that this abstract or extract of the reproductive fluid is nothing but genetic & chromosomal content of the gametes. Quran says :

“We continued the human progeny from the extract of a mean fluid”.

6. Sex is determined by X or Y contribution from the sperms. This fact is beautifully expressed by Quran as follows:

“And He create pairs male and female from a drop when it is deposited” (53:49).

“Allah created you from dust, then from gamete, then he made you pairs (male & female)” (35:11).

7. Quran hints towards the important function of uterus as an immunological barrier, in a very suitable terminology which also expresses the “homeostatic” rule of uterus.

“Then we placed him as a drop (gamete) in a Khararin-makeen.”

The word Khararin-makeen is commonly translated as “safe-lodging” but it also conveys the meaning of “Stable-environment,” a word very close to “homeostasis”.

Conclusion :-

There are several important characteristic properties of reproductive fluid (containing sperms or ovum) which are narrated by Holy Quran. These can be summarized as follows:-

Reproductive fluid.

1. It is a weak or mean fluid (77:20)
2. Progeny is continued from its extract (32:8).
3. It is a “gushing” fluid (86:6).

Gametes:-

- 1) Man is created from gametes (16:4) (36:77).
- 2) Man is created from a mixed fluid (zygote) (76:2).
- 3) Zygote undergoes testing, and emerges successful by divine guidance (76:3).
- 4) Sex is determined by gametes (35:11) (53:467).
- 5) Gametes are placed in a “safe-lodging” (23:14) (77:20).

REFERENCES

1. Holy Quran : with each verse the reference given in parenthesis, indicates the surah number and verse number respectively.
2. Embryology Text books.

सारांश

कुरान में गेमेट वर्णन

- सिकन्दर हुसेन

प्रजनक तरल के मुख्यतः अनक विशिष्ट गुण होते हैं । प्रजनक कोषाणुओं को गेमेट्स कहा जाता है । इन में से पुरुषों के कोषाणुओं में शुक्राणु तथा स्त्रियों के कोषाणुओं में अण्डाणु होते हैं । गर्भाधान की प्रक्रिया में यह कोषाणुओं के परस्पर मिलने से युग्मनज बनता है । पवित्र कुरान में गेमेटों के गुणों का बहुत ही उपयुक्त एवं चयनित पारिभाषिक शब्दावली में वर्णन मिलता है । प्रस्तुत लेख में गेमेटों से संबंधित विभिन्न कुरानीय पारिभाषिक शब्दों का चयन कर उनके वैज्ञानिक महत्त्व के विषय में विचार-विमर्श किया गया है ।