

A Letter to the Editor on *Mycoplasma hominis* Infection in Spontaneous Abortions in Thrace Population: Detection by PCR

Kowsari A, Fazaeli H and Sheykhasan M*

Department of Stem Cells, The Academic Center for Education, Culture and Research, Qom, Iran

Dear Editor,

It was with great interest that we reviewed the article entitled “*Mycoplasma hominis* Infection in Spontaneous Abortions in Thrace Population: Detection by PCR” by Iliopoulou et al. in 2017 published in the Human Genetics and Embryology.

Incomplete pregnancy, including miscarriage, stillbirth and premature birth, has a major clinical concern for obstetricians and gynecologists. Spontaneous abortion and stillbirth are called as the termination of pregnancy before and after 20 weeks of pregnancy respectively [1]. *Mycoplasmas* represent some of the smallest and simplest free-living organisms known [2]. *Mycoplasma hominis* is associated with pelvic inflammatory disease, bacterial vaginosis, post-partum fever, sepsis and infections of the central nervous system often leading to serious conditions [3]. The role of *Mycoplasma hominis* in urogenital tract infections, remain unknown [4]. Lack of a cell wall makes these organisms naturally resistant to β -lactam antibiotics and not detectable by Gram staining. *M. hominis* is a recognized agent of genital infections in adults as well as of neonatal infections [5,6]. *Mycoplasma* causing harmful effects on the reproductive health of women has been confirmed with recurrent spontaneous abortion, ectopic pregnancy and preterm delivery. However, a positive correlation is not clear with infertility and *M. hominis*. In addition to financial and physical disadvantages that abortion has on women, it is also important in case of emotional and social costs. *Mycoplasma hominis* bacteria are not feasible and not be detected with conventional laboratory methods [7]. Science this bacteria has no cell wall its resistance to beta-lactam antibiotics is not surprising and gram stain is not detectable, as well. *M. hominis* is a known infection of the genital tract in adults and infants [8,9]. Because the usual antibiotics are not active against *Mycoplasma hominis*, diagnosis of the infection caused by the bacterium becomes important especially for the extra-genital tract cases.

6 suggestions noticed on blow, especially, according to the results of several studies, can cause considerable outcome improvements on the published article by Iliopoulou et al. in 2017:

- As it is shown in a study by Otgonjargala et al. in 2017, the examination of more number of samples would change results. So using a greater sample size is suggested [3].

- Regarding the possibility of this infection existence even in normal individuals as reported by Farhadifar et al. in 2016, precise examination of infection is of great importance [10]. So, Real time PCR should be used to assess infection rate in abortion to detect the minimum amount of infection led to abortion [4,11].

- Due to the importance of *Mycoplasma hominis* infection and according to Safarkar et al. in 2017, real time PCR method is better to be used in order to increase rapidity, precision and sensitivity of intended evaluation [5].

- As it is reported that except *hominis*, there are 13 other species of mycoplasma involved in abortion, assessment of other infection is required [6].

- According to Campos et al. in 2015, which noted the elevated level of inflammatory cytokines in infection, the assessment of the amount of these cytokines seems to be useful [12].

- Regarding to the fact that this infection existed in not aborted fetuses, its assessment among normal individuals is suggested [10].

References

1. Frøen JF, Cacciatore J, McClure EM, Kuti O, Jokhio AH, et al. (2011) Stillbirths: Why they matter. *Lancet* 377: 1353-1366.
2. Brown R (2016) Characterization and genetic analysis of *Mycoplasma hominis* and *Mycoplasma pneumoniae*. Diss Cardiff University, UK.
3. Otgonjargala B, Becker K, Batbaatar G, Tsogtsaikhan S, Enkhtsetseg J, et al. (2017) Effect of *Mycoplasma hominis* and cytomegalovirus infection on pregnancy outcome: A prospective study of 200 Mongolian women and their newborns. *PloS one* 12: e0173283.
4. Baczynska A, Svenstrup HF, Fedder J, Birkelund S, Christiansen G (2004) Development of real-time PCR for detection of *Mycoplasma hominis*. *BMC Microbiol* 4: 35.
5. Safarkar R, Mehrabadi JF, Noormohammadi Z, Mirnejad R (2017) Development a rapid and accurate multiplex real time PCR method for the detection Chlamydia trachomatis and *Mycoplasma hominis*. *J Clin Lab Anal* 31.
6. Leli C, Mencacci A, Latino MA, Clerici P, Rassu M, et al. (2017) Prevalence of cervical colonization by *Ureaplasma parvum*, *Ureaplasma urealyticum*, *Mycoplasma hominis* and *Mycoplasma genitalium* in childbearing age women by a commercially available multiplex real-time PCR: An Italian observational multicentre study. *J Microbiol Immunol Infect* S1684-1182: 30091-30099
7. Waites KB, Xiao L, Paralanov V, Viscardi RM, Glass JI (2013) *Mycoplasma* and *ureaplasma*. In *Molecular Typing in Bacterial Infections* (pp. 229-281). Humana Press, Totowa, NJ, USA.
8. Taylor P (1998) Medical significance of mycoplasmas. In: *Mycoplasma Protocols*. Humana Press, pp. 7-15.
9. Waites KB, Katz B, Schelonka RL (2005) *Mycoplasmas* and *ureaplasmas* as neonatal pathogens. *Clin Microbiol Rev* 18: 757-789.
10. Farhadifar F, Khodabandehloo M, Ramazanzadeh R, Rouhi S, Ahmadi A, et al. (2016) Survey on association between *Mycoplasma hominis* endocervical infection and spontaneous abortion using Polymerase Chain Reaction. *Int J Reprod Biomed (Yazd)* 14: 181-186.
11. Pascual A, Jatón K, Ninet B, Bille J, Greub G (2010) New diagnostic real-time PCR for specific detection of *Mycoplasma hominis* DNA. *Int J Microbiol* 2010: 317512.
12. Campos GB, Lobão TN, Selis NN, Amorim AT, Martins HB, et al. (2015) Prevalence of *Mycoplasma genitalium* and *Mycoplasma hominis* in urogenital tract of Brazilian women. *BMC Infect Dis* 15: 60.

*Corresponding author: Sheykhasan M, Department of Stem Cells, The Academic Center for Education, Culture and Research, Qom, Iran, Tel: 02532700152; E-mail: m.sheykhasan@accer.ac.ir

Received February 03, 2018; Accepted February 23, 2018; Published March 02, 2018

Citation: Kowsari A, Fazaeli H, Sheykhasan M (2018) A Letter to the Editor on *Mycoplasma hominis* Infection in Spontaneous Abortions in Thrace Population: Detection by PCR. *Human Genet Embryol* 8: 145. doi:10.4172/2161-0436.1000145

Copyright: © 2018 Kowsari A, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.