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Effects of the Presence of Pus Cells in Seminal Fluid Samples on Sperm Motility and Morphology in a Group of Males who attended to Subfertility Clinics in Galle District

Kadahetti K.P.[1#], Rodrigo M.[2], Fernando H.H.L.K.[3]
[1]*Department of Medical Laboratory Science, Faculty of Allied Health Sciences, University of Ruhuna, Sri Lanka*
[2]*Department of Anatomy, Faculty of Medicine, University of Ruhuna, Sri Lanka*
[3]*Department of Pre Clinical Sciences, Faculty of Medicine, General Sir John Kotelawala Defence University, Sri Lanka*

[#] ***Corresponding author:*** *4kaveeshakadahetti@gmail.com*

Background: The quality of seminal fluid is one of the main determinants of male fertility. The quality of seminal fluid is determined by several parameters, such as volume, sperm concentration, percentage of normal morphology, motility, viability, progressivity etc.

Objectives: To assess the effects of the presence of pus cells in seminal fluid samples on normal morphology and motility.

Methods: A quasi-experimental study was conducted among sample of 107 men who attended for subfertility clinics in Galle district. Convenience sampling method was used. After obtained the informed consent, semen samples were collected. Pus cell count, sperm motility and normal morphology were evaluated based on the WHO guidelines (2010). Data were analyzed using independent sample t-test in SPSS software version 20.0. Level of significance was considered as 0.05.

Results: Majority of samples had pus cell count less than 5 (n=75, 70.1%). Only 32 (29.9%) had pus cell count 5 or above. Out of 75 samples with pus cell count <5, 32 samples (42.7%) had percentage normal morphology more than 30% while only 3 samples (9.4%) with pus cell count ≥5 had percentage normal morphology more than 30%. The mean and standard deviation (±SD) of normal morphology were 26.88 and 8.69 for samples with pus cell count <5 while 21.39 and 6.99 for samples with pus cell count ≥5. The finding was highly significant (p=0.002). Thirty two (42.7%) out of 75 samples with pus cells <5 had normal motility (≥50%). However, only 6 (19%) of 32 samples with pus cells ≥5 had normal motility (≥50%). The mean and standard deviation (SD) of normal motility were 46.59 and 10.95 for samples with pus cell count <5 while 41.25 and 10.37 for samples with pus cell count ≥5. The finding was highly significant (p=0.021).

Conclusions: A highly significant correlation was observed between the presence of pus cells more than 5 in seminal fluid samples and percentages of normal morphology and motility. The results of this study showed that pus cell count showed an inverse relationship with normal morphology and motility of sperms.

Keywords: *Morphology, Motility, Pus cells, Sperm*