

# CHARACTERIZATION AND QUANTIFICATION OF SPERM RHEOLOGICAL PROPERTIES AND MOTILITY



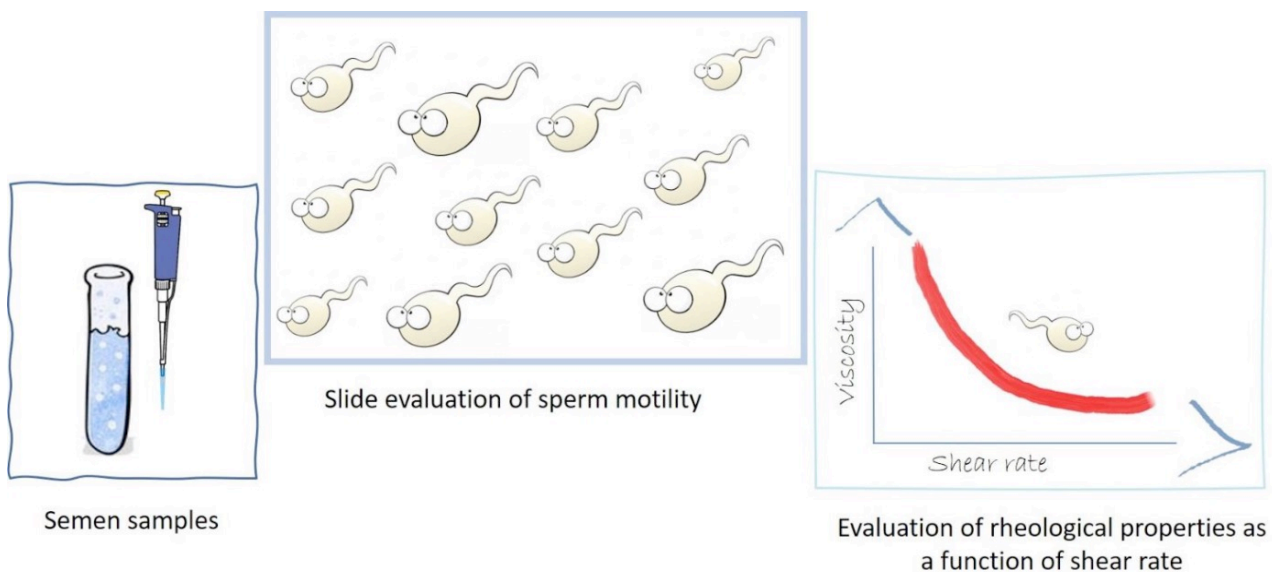
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Currently the spermiogram, the routine analysis of the seminal fluid, represents the backbone of semen characterization. However, it is not able to test the fertilizing capacity as it tends to just consider semen parameters such as concentration, motility and morphology, neglecting other fundamental external factors and causes. In fact, it happens that a seminal fluid classified as normospermic may not be able to generate a pregnancy, excluding the female problem as a basis. In this case, we talk about male idiopathic infertility. In fact, multiple damages to the seed are not considered, such as: defects in spermatogenesis, hormonal problems, oxidative stress, genetic abnormalities. The causes of these complications can also highly be affected to lifestyle.

Therefore, greater attention should be paid to the viscosity of the seed whose characterization in PMA laboratories is evaluated by operator-dependent methods. An in-depth rheological analysis of viscosity associated with semen anomalies sought outside the conventional analysis, could explain the etiology of male idiopathic infertility, which is so far not completely understood.

In addition, the results of this work suggest that elasticity, in addition to viscosity, plays a fundamental role and can be used as an indicator of sperm transport capacity, thus inspiring advances in artificial insemination and medical treatments for male infertility.



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