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JOURNAL ARTICLE

Factors influencing the success of sperm-cervical mucus interaction in patients exhibiting unexplained infertility

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The factors regulating the success of sperm-cervical mucus interaction in 46 patients exhibiting unexplained infertility were analyzed. Within this group of patients, considerable variation in the degree of mucus penetration, which appeared to be related to the properties exhibited by the spermatozoa rather than the quality of the mucus itself, was observed. The ability of the spermatozoa to fuse with zona-free hamster oocytes reflected their capacity for mucus penetration, regardless of whether human or bovine cervical mucus was used as the target. Multiple regression analysis also indicated the importance of the movement characteristics exhibited by the spermatozoa, which alone could account for up to 85% of the variability in mucus penetration. The concentration of motile spermatozoa and their linear velocity of progression influenced the number of spermatozoa penetrating the mucus in unit time, presumably through an effect on the frequency of collisions at the cervical mucus interface. Whether these collisions resulted in mucus penetration depended upon the movement characteristics of the spermatozoa and was positively associated with a "rolling" mode of progression and the amplitude of lateral sperm head displacement.

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Cl⁻ Is Required for HCO₃⁻ Entry Necessary for Sperm Capacitation in Guinea Pig: Involvement of a Cl⁻/HCO₃⁻ Exchanger (SLC26A3) and CFTR

Biol Reprod, January 1, 2009; 80(1): 115 - 123.

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