IMPROVEMENT IN SEMEN QUALITY AND FREQUENCY OF SPONTANEOUS ACROSOME REACTION AFTER PENTOXIFYLLINE ADDITION IN NORMOZOOSPERMIC MEN. S.C. Esteves, R.K. Sharma, A. J. Thomas, and A. Agarwal, Andrology Research & Clinical Laboratories, Department of Urology, Cleveland Clinic Foundation, Cleveland OH 44195

Incubation of highly selected motile sperm population with pentoxifylline improves sperm motion parameters and optimizes induced acrosome reaction. The aim of this study was to evaluate if pentoxifylline when added directly to the seminal plasma can improve sperm motion and acrosome reaction. Sperm specimens from 15 volunteers with normal semen volume, sperm count, and motility were divided into two aliquots: one aliquot was treated by directly adding pentoxifylline (5 mM) and the second without pentoxifylline (control). Both aliquots were incubated for 30 minutes. Percent motility and motion characteristics were evaluated by computer assisted semen analyzer. Spontaneous acrosome reaction (AR) was assessed by fluorescein conjugated peanut lectin. Viability was assessed by Hoechst-33258 stain. Pentoxifylline treatment increased percent motility, amplitude of lateral head displacement and hyperactivation status of sperm (P < 0.05). No change was seen in other motion characteristics. The frequency of AR in viable sperm was higher in the pentoxifylline treated group (19.2 ± 8.4%) compared to control (10.7 ± 5.9; P = 0.005). The effect of pentoxifylline on sperm motion characteristics varies in normozoospermic men. In selected cases it may enhance the fertilizing ability of the sperm by increasing the number of acrosome reacted spermatozoa.