Reply

Dear Editor,

I would like to thank the reader for sincere appreciation, deep interest and scholarly analysis of the article. In response to the queries raised by the author, I have the following to submit:

Slow freezing may lead to widespread chemico-physical injury to sperm cell membranes due to alterations in lipid-phase transition along with increased lipid peroxidation. The resultant production of reactive oxygen species leads to an increase in oxidative damage during cryofreezing and is associated with a loss of spermatozoal motility. This irreversible injury to human spermatozoa membranes is provoked during thawing and has been related to diminished antioxidant defensive activity during cooling process. It is also well established that taurine and hypotaurine with their metabolic precursors cysteine and cysteinesulphinic acid could act as antioxidants in vivo. Our study was carried out on normospermic sample as per WHO 2010 criterion. In our study for sake of simplicity we did not use density gradient media. Secondly, it is well known that normospermic samples are less prone to the membrane damage thus hypotaurine supplementation was not carried out. We would definitely support the fact that density gradient technique should be preferred for sperm preparation in compromised oligospermic samples.

As brought about above, centrifugation and cryopreservation process leads to Reactive Oxygen Species (ROS) generation in the semen sample. Longer incubation for 40 min may not generate ROS in the sample, as it would have already occurred during freezing thawing process. We agree that increasing the height of media column for post thaw swim up will help us in obtaining a sample with better progressive motility but we would also like to add that it may lead to less number of sperms swimming up the column.

Col Pankaj Talwar, VSM
Senior Advisor & Head, Assisted Reproductive Technologies Centre,
Army Hospital (R&R), Delhi Cantt, India
E-mail address: pankaj_1310@yahoo.co.in

Available online 29 December 2014

DOI of original article: <http://dx.doi.org/10.1016/j.mjafi.2014.12.014>

<http://dx.doi.org/10.1016/j.mjafi.2014.12.015>
0377-1237/© 2014, Armed Forces Medical Services (AFMS). All rights reserved.