Journal of Andrology, Vol. 26, No. 5, September/October 2005

DOI: 10.2164/jandrol.05092

Perspectives and Editorials: Letter to the Editor

Response: Responsiveness to Tamoxifen Citrate and Testosterone Undecanoate Is Independent of the Severity of Idiopathic Oligozoospermia

Giorgio Cavallini
Headquarters of Societá Italiana di Medicina della Reproduzione (SISMER) Bologna, Italy

To the Editor:

I am sorry for the misunderstanding and thank the Editor because he gave me the opportunity to explain the mechanisms that provoked my mistake.

My confusion originates from the following wording: "total sperm count x 10^6/mL" present in the abstract and in table 1, page 916, of the Adamopoulos article (Adamopoulos et al, 2003). In this regard, I have intended "sperm concentration/mL," instead of total ejaculated sperm.

The World Health Organization (WHO) handbook does not list any sperm pattern alike: "total sperm count x 10^6/mL," and, most importantly, fractional values (ie,... x 10^6/mL) always indicate a concentration (WHO, 1999).

Almost all articles regarding therapy for oligoasthenospermia take into consideration sperm concentration per milliliter instead of total ejaculated sperm (WHO, 1989, 1992; Rege et al, 1997; Kamischke et al, 1998; Rolf et al, 1999; Vicari and Calogero, 2001; Foresta et al, 2002; Wong et al, 2002; Cavallini et al, 2003; Lenzi et al, 2003, 2004; Zawackzi et al, 2003).

It is uncommon to present data regarding number of total ejaculated sperm, even though an increase in sperm concentrations in OAT (oligo-astheno-teratospermia) infertile males has been thought to be associated with disproportionately higher fecundability (Adamopoulos et al, 2003), because the in vivo and in vitro fertilization proved to be more strictly linked to the quality of spermatogenesis than to the number of ejaculated sperm (Tomlinson et al, 1992; Patrizio et al, 1994; Parinaud et al, 1996a,b; Aboulghar et al, 1997; Verheyen et al, 1997; De Croo et al, 2000).

In this regard, sperm concentration per milliliter is more closely linked to the spermatogenetic process than to the number of total ejaculated sperm (Biagiotti et al, 2002).

References

Aboulghar MA, Mansour RT, Serour GI, Fahmy I, Kamal A, Tawab NA. Fertilization and pregnancy rates after intracytoplasmic sperm injection using ejaculate semen and surgically retrieved sperm. *Fertil Steril.* 1997;68: 108 -111.[CrossRef][Medline]

Adamopoulos DA, Pappa A, Billa E, Nicopoulou S, Koukkou E, Michoupoulos J. Effectiveness of combined tamoxifen citrate and testosterone undecanoate in men with idiopathic oligozoospermia. *Fertil Steril.* 2003;80: 914 -920.[CrossRef][Medline]

Biagiotti G, Cavallini G, Modenini F, Vitali G, Gianaroli L. Spermatogenesis and spectral echo-colour Doppler traces from the main testicular artery. *BJU Int.* 2002; 90: 903 -908.[CrossRef][Medline]

Cavallini G, Biagiotti G, Ferraretti AP, Gianaroli L, Vitali G. Medical therapy of oligoasthenospermia associated with left varicocele. *BJU Int.* 2003;91: 513 -518.[CrossRef][Medline]

De Croo I, Van der Elst J, Everaert K, De Sutter P, Dhont M. Fertilization, pregnancy and embryo implantation rate after ICSI in cases of obstructive and nonobstructive azoospermia. *Hum Reprod.* 2000;15: 1383 -1388.[Abstract/Free Full Text]

Foresta C, Bettella A, Merico M, Garolla A, Ferlin A, Rossato M. Use of recombinant human follicle-stimulating hormone in the treatment of male infertility. *Fertil Steril.* 2002; 77: 238 -244.[CrossRef][Medline]

Kamischke A, Behre HM, Bergman M, Simoni M, Schafer T, Nieschlag E. Recombinant human follicle stimulating hormone for treatment of male idiopathic infertility: a randomized double-blind, placebo-controlled, clinical trial. *Hum Reprod.* 1998; 13: 596 -603.[Abstract/Free Full Text]

Lenzi A, Lombardo F, Sgrò P, Salacone P, Caponnecchia L, Dondero F. Use of carnitine therapy in selected cases of male factor infertility: a double blind cross over trial. *Fertil Steril.* 2003;79: 292 -300.[CrossRef][Medline]

Lenzi P, Sgrò P, Salacone P, Paoli D, Gilio B, Lombardo F, Santulli M, Agarwal A, Gandini L. A placebo controlled double blind randomized trial of the use of combined L-carnitine and acetyl-L-carnitine in men with asthenospermia. *Fertil Steril.* 2004;81: 1578 -1584.[CrossRef][Medline]

Parinaud J, Richoilley G, Moutaffian H, Vieitez J, Mieusset R. Are the characteristics of spermatozoa in the insemination medium useful for predicting in vitro fertilization results. *Int J Androl.* 1996a;19: 103 -108.[Medline]

Parinaud J, Vieitez J, Moutaffian H, Richoilley G, Milhet P. Relationships between sperm motility parameters, morphology and acrosomal reaction of human spermatozoa. *Hum Reprod.* 1996b; 11: 1240 -1243.[Abstract/Free Full Text]

Patrizio P, Ord T, Silber SJ, Asch RH. Correlation between epididymal length and fertilization rate in men with congenital absence of vas deferens. *Fertil Steril.* 1994; 61: 265 -268.[Medline]

Rege NN, Date J, Kulkarni V, Prem AR, Punekar SV, Dahanukar SA. Effect of Y virilin on male infertility. *J Postgrad Med.* 1997;43: 64 -67.[Medline]

Rolf C, Cooper TG, Yeung CH, Nieschlag E. Antioxidant treatment of patients with asthenospermia or moderate oligoasthenospermia with high dose vitamin C and vitamin E: a randomized placebo controlled, double blind study. *Hum Reprod.* 1999; 14: 1028 -1033.[Abstract/Free Full Text]

Tomlinson MJ, Barrat CL, Bolton AE, Lenton EA, Roberts HB, Cooke ID. Round cells and sperm

fertilization capacity: the presence of immature germ cells but not seminal leukocytes are associated with reduced success of in vitro fertilization. *Fertil Steril.* 1992; 58: 1257 -1259. [Medline]

Verheyen G, Nagy Z, Joris H, De Croo I, Tournaye H, Van Steirteghem A. Quality of frozen thawed testicular sperm and its preclinical use for intracytoplasmic sperm injection into in vitro-matured germinal-vesicle stage oocytes. *Fertil Steril.* 1997; 67: 74 -80.[CrossRef][Medline]

Vicari E, Calogero AE. Effects of treatment with carnitines in infertile patients with prostato-vesiculo-epididymitis. *Hum Reprod.* 2001;16: 2338 -2342.[Abstract/Free Full Text]

Wong WY, Merkus HM, Thomas CM, Menkveld R, Zielhuis GA, Steegers-Theunissen RP. Effects of folic acid and zinc sulfate on male factor subfertility: a double blind, randomized, placebo controlled trial. *Fertil Steril.* 2002; 77: 491 -498.[CrossRef][Medline]

World Health Organization. *WHO Laboratory Manual for the Examination of Human Semen and Semen-Cervical Mucus Interactions.* 4th ed. Cambridge, United Kingdom: Cambridge University Press; 1999 .

World Health Organization Task Force on the diagnosis and treatment of infertility. Mesterolone and idiopathic male infertility: a double blind study. *Int J Androl.* 1989; 12: 254 -264.[Medline]

World Health Organization Task Force on the diagnosis and treatment of infertility. A double blind trial of clomiphene citrate for the treatment of idiopathic male infertility. *Int J Androl.* 1992; 15: 299 -397.[Medline]

Zawackzi Z, Szollosi J, Kiss SA, Koloszar S, Fejes I, Kowaks L, Pal A. Magnesium orotate supplementation for idiopathic infertile male patients: a randomized placebo controlled clinical pilot study. *Magnes Res.* 2003;16: 131 -136.[Medline]