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The clinical management of couple infertility suffers from a way of thinking still widely diffused today among those working in the field, who often consider the understanding of the male factor of infertility too vague and its remedies not yet supported by solid scientific evidence. Consequently it often happens that couples are initiated directly to assisted reproduction techniques (ART), even in the presence of a male factor, undiagnosed or untreated [1, 2]. Unilateral handling of reproductive care, according to this common way of thinking, should provide the couple with the best chances of procreation. In fact, there are four strong reasons to favor bilateral management of the infertile couple, including an assessment of the male.

Firstly, infertility should be considered a disease. It can be an expression of sometimes serious disorders not yet diagnosed at the time of the search for pregnancy [3, 4]. A comprehensive male infertility evaluation may allow to detect significant disease(s) that otherwise would have remained undiagnosed if the evaluation of the male factor were limited to seminal examination only. Recent studies have suggested that male infertility may be associated with reduced longevity [5] and that male factor infertility is an increased risk factor for certain malignancies [6, 7]. Furthermore, the condition of an infertile male can cause psychological and marital stress [8–10]. Quantifying this risk, it has been estimated that for every 15 couples evaluated, in 1 couple (6 %) the male partner has a significant medical condition [11].

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These figures highlight the concept that not to provide infertile males with an appropriate diagnostic evaluation should be regarded as an error and/or omission by the physician and a missed opportunity, objectively difficult to justify.

Secondly, a correct andrologic diagnostic workout may unveil infertility factors in about 70 % of infertile males [12]. Many of such factors are correctable or treatable, with the perspective ideally to allow the couple to spontaneously conceive, but also to have better chances of success when exposed to ART [13–16].

Thirdly, scientific evidence suggests that considering the high cost, success rates, and possible side effects of ART, early efforts to improve male fertility appear to be an attainable and worthwhile primary goal. The main results obtained concern evidence-supported indications regarding other causes of male infertility, and their early detection and treatment [17].

Lastly, it should be appreciated that the modern andrologist is no longer a specialist acting according to personal experience and common sense only. Scientific evidence and ensuing clinical guidelines are in fact today available. The skills of the andrologist today encompass internal medicine, endocrinology, seminology, microbiology, molecular biology surgery, and genetics. Pertinent scientific societies, according to the available peer reviewed literature, have produced guidelines, recommendations and diagnostic/therapeutic algorithms. Such advances in the andrologic field allow today infertile males to be properly evaluated and potentially treated, making the andrologist the male infertility specialist that is equipped with the latest medical knowledge.

References

1. Nicopoullos JD, Gilling-Smith C, Ramsay JW (2004) Male-factor infertility: do we really need urologists? A gynaecological view. *BJU Int* 93:1188–1190
2. Tournaye H (2006) Evidence-based management of male subfertility. *Curr Opin Obstet Gynecol* 18:253–259
3. Honig SC, Lipshultz LI, Jarow J (1994) Significant medical pathology uncovered by a comprehensive male infertility evaluation. *Fertil Steril* 62:1028–1034
4. Salonia A, Matloob R, Gallina A, Abdollah F, Saccà A, Briganti A, Suardi N, Colombo R, Rocchini L, Guazzoni G, Rigatti P, Montorsi F (2009) Are infertile men less healthy than fertile men? Results of a prospective case–control survey. *Eur Urol* 56(6):1025–1031
5. Jensen TK, Jacobsen R, Christensen K, Nielsen NC, Bostofte E (2009) Good semen quality and life expectancy: a cohort study of 43,277 men. *Am J Epidemiol* 170(5):559–565
6. Walsh TJ, Schembri M, Turek PJ, Chan JM, Carroll PR, Smith JF, Eisenberg ML, Van Den Eeden SK, Croughan MS (2010) Increased risk of high-grade prostate cancer among infertile men. *Cancer* 116(9):2140–2147
7. Walsh TJ, Croughan MS, Schembri M, Chan JM, Turek PJ (2009) Increased risk of testicular germ cell cancer among infertile men. *Arch Intern Med* 169(4):351–356
8. Smith JF, Walsh TJ, Shindel AW, Turek PJ, Wing H, Pasch L, Katz PP, Infertility Outcomes Program Project Group (2009) Sexual, marital, and social impact of a man’s perceived infertility diagnosis. *J Sex Med* 6(9):2505–2515
9. Eisenberg ML, Smith JF, Millstein SG, Walsh TJ, Breyer BN, Katz PP, Infertility Outcomes Program Project Group (2010) Perceived negative consequences of donor gametes from male and female members of infertile couples. *Fertil Steril* 94(3):921–926

10. Nelson CJ, Shindel AW, Naughton CK, Ohebshalom M, Mulhall JP (2008) Prevalence and predictors of sexual problems, relationship stress, and depression in female partners of infertile couples. *J Sex Med* 5(8):1907–1914
11. Kolettis PN, Sabanegh ES (2001) Significant medical pathology discovered during a male infertility evaluation. *J Urol* 166:178–180
12. Jungwirth A, Giwercman A, Tournaye H, Diemer T, Kopa Z, Dohle G, Krausz C, European Association of Urology Working Group on Male Infertility (2012) European Association of Urology guidelines on male infertility: the 2012 update. *Eur Urol* 62(2):324–332
13. Esteves SC, Oliveira FV, Bertolla RP (2010) Clinical outcome of intracytoplasmic sperm injection in infertile men with treated and untreated clinical varicocele. *J Urol* 184(4):1442–1446
14. Cocuzza M, Cocuzza MA, Bragais FM, Agarwal A (2008) The role of varicocele repair in the new era of assisted reproductive technology. *Clinics (Sao Paulo)* 63(3):395–404
15. Showell MG, Brown J, Yazdani A, Stankiewicz MT, Hart RJ. (2011). Antioxidants for male subfertility. *Cochrane Database Syst Rev* (1):CD007411
16. Valenti D, La Vignera S, Condorelli RA, Rago R, Barone N, Vicari E, Calogero AE (2013) Follicle-stimulating hormone treatment in normogonadotropic infertile men. *Nat Rev Urol* 10(1):55–62
17. Campagne DM (2013) Can male fertility be improved prior to assisted reproduction through the control of uncommonly considered factors? *Int J Fertil Steril* 6(4):214–223