Proposal for a new diagnostic-therapeutic classification of male factor infertility: preliminary analysis

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Background

Couple infertility is a clinical condition defined as the inability to conceive after at least 12 months of regular and unprotected sexual intercourse. It is estimated that the Male Factor of Infertility (MFI) is present, alone or in combination with the female factor, in about 2/3 of cases of couple infertility. The complete diagnostic pathway of MFI (medical history, physical examination, hormonal tests, scrotal color Doppler ultrasound, complete seminal analysis, possible second level tests such as sperm culture or transrectal prostate ultrasound or genetic tests) allows to categorize the causes of MFI into specific categories that help the clinician to orient himself towards the most appropriate therapeutic choice. These categories have recently been proposed by a group of authors (new diagnostic-therapeutic classification of MFI).

Aims

To carry out a preliminary evaluation of this new classification of MFI in a large cohort of male infertile patients referring to the Unit of Andrology and Reproductive Medicine (University Hospital of Padua).

Results

We therefore retrospectively evaluated infertile male patients attending our Unit, collecting data in order to categorize the patients in the most appropriate category. For this preliminary analysis we excluded patients with the presence of known female problems, eventually enrolling 350 male patients with an average age of 37.5 years (average age of the partner 35.5 years). The enrolled patients were divided into the diagnostic-therapeutic categories of MFI as follows: IA (semen infection) 31/350; IB (male accessory gland inflammation) 49/350; II (congenital or acquired total obstruction): 11/350; IIIA (primary testicular disease with increased FSH): 143/350; IIIB (primary testicular disease with normal FSH): 87/350; IV (hypogonadotropic hypogonadism): 7/350; V (idiopathic semen alterations): 6/350; VI (idiopathic male infertility with normal semen analysis): 12/350. When dealing with clinically relevant varicocele, considered as a cause in itself, it was present in 4/350 patients.

Conclusions

Our preliminary data showed that it is almost always possible to find a cause for MFI; this data collection, however, is affected by the fact that it refers to a case history of patients attending a level III center, justifying the high prevalence of patients in category IIIA. This new diagnostic-therapeutic categorization of MFI is simple and rapid, also providing an indication of the possible therapeutic proposal for the male infertile patient.

Recommended reading

- *Ferlin A, Calogero AE, Krausz C, et al. Management of male factor infertility: position statement from the Italian Society of Andrology and Sexual Medicine (SIAMS): Endorsing Organization: Italian Society of Embryology, Reproduction, and Research (SIERR). J Endocrinol Invest. 2022;45(5):1085-113.*
- *Grande G, Garolla A, Graziani A, et al. Comprehensive diagnostic and therapeutic approach to male factor infertility aimed at natural fertility: a multicentric retrospective cohort study Andrology. 2025 Feb 10. doi: 10.1111/andr.70006.*
- *Grande G, Graziani A, Scafa R, et al. FSH therapy in male factor infertility: evidence and factors which might predict the response. Life (Basel). 2024;14(8):969.*
- *Santi D, Corona G, Salonia A, et al. Current drawbacks and future perspectives in the diagnosis and treatment of male factor infertility, with a focus on FSH treatment: an expert opinion. J Endocrinol Invest. 2025 Jan 13. doi: 10.1007/s40618-024-02524-x.*