WHAT CAN BE DONE TO IMPROVE OUR ART OUTCOME: THE AMERICAN AND THE EUROPEAN EXPERIENCE

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It is difficult to judge how centres perform in IVF, in particular because registration is almost never prospective.
From a theoretical perspective it is of paramount importance to perform a complete work-up of the couples, to obtain a distinct diagnosis. Evaluation of all parameters including endocrinology, endometrial behaviour and sperm factors are crucial.
It is also important to define ART outcome, which could be singleton delivery rate, high implantation rates, and high pregnancy rates after egg vitrification and after the replacement of frozen-thawed embryos.
Improvement has also to be evaluated, not also as far as efficiency is concerned, but also as far as safety is concerned with respect to the occurrence of multiple pregnancies and the occurrence of ovarian hyperstimulation syndrome.
Improvement has to be viewed with respect to the occurrence of OHSS. It is unacceptable nowadays that young woman suffer from this iatrogenic syndrome.
Improvement is closely linked to the concept of OHSS Free Clinic. This goal can only be reached if down regulation is performed with GnRH antagonist treatment and GnRH agonist triggering in patients at OHSS risk.
Needless to say that cryopreservation of oocytes and embryos is a key player.
Endometrium receptivity has been largely neglected. It has been clearly demonstrated that in 15% of IVF cycles endometrial histology and gene analysis can significantly predict that implantation will not occur. For this reason cryopreservation technology is capable to circumvent this event by replacing embryos after thawing in a natural or artificial cycle.
Several studies did demonstrate that embryos obtained after fertilization of thawed oocytes do well after replacement in a non-stimulated, but in a natural or artificial cycle.
Especially after vitrification of blastocyst, there is evidence that for safety issues SET replacement is mandatory.
It has been clearly demonstrated that day 5 embryos do implant significantly better than day 3.
Improvement is only possible after the development of new concepts, which are validated in randomized controlled trials. These trials are of paramount importance. Examples are for instance day 3 versus day 5 replacements, oocyte freezing versus standard treatment, cycle programmation studies, replacement of cryopreserved embryos in natural and artificial cycles, etc …
In conclusion: improving of ART includes GnRH agonist triggering, optimization of cryopreservation technology, replacement of one embryo avoiding multiple pregnancy rates.

References:
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