

INFALLIBLE PROCESSES IN REPRODUCTION: EFFICIENCY OF PREVENTATIVE RFID SYSTEMS AND QUALITY CONTROLS IN AN ART CENTRE

INTRODUCTION

During the manipulation of gametes in an Assisted Reproductive Technology (ART) centre, despite double or even triple controls by staff at the most critical stages, errors can occur, which although rare, undoubtedly lead to complex situations with regulatory, legal and ethical implications.

The aim of any ART centre should be “zero risk”, using all available means to achieve it.

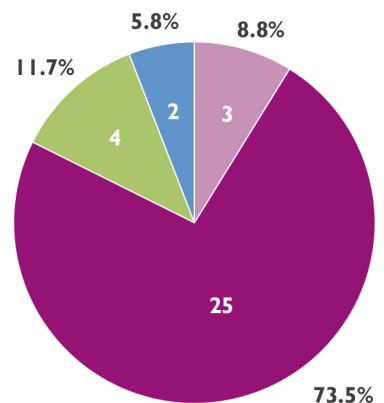
MATERIALS AND METHODS

The aim of this retrospective single-centre study, conducted on 6,557 cycles, is to analyse the efficiency of a patient ID recognition system based on radio frequency, the RI Witness, in addition to the visual double or triple checks routinely performed, and to identify the possible causes of error.



RESULTS

Over the 6,557 cycles, 210 critical procedures were monitored according to the radio frequency system (manipulations of gametes, fertilisation step, change of sperm preparation tubes). We observed 34 errors (0.01%), none of which were due to real mishandling. Indeed, in 3 cases (8.8%), the system identified the discrepancy of the presence of two female patients although they were actually lesbian couples. In 25 cases (73.5%) the husband's name had been entered in the computer database incorrectly resulting in a lack of recognition and matching of gametes. In 4 cases (11.7%) a male patient was identified as a female in the computer database. Note: 2 reciprocal cases (5.8% of mismatches, 0.000001 controls) between two couples of patients who had accidentally exchanged their computer ID card: the patient, inserting her ID card which in fact was not her own, was not recognized as compatible with her partner by the system.



- Female couple
- Male name incorrectly entered
- Male / female IDs inverted
- Exchange of ID cards between two patient couples

CONCLUSIONS

Radio frequency control systems are useful to the safety of an ART centre as an additional security level. The likelihood of substantial errors or confusion between gametes is extremely low.