

RESUMO - INTELIGÊNCIA ARTIFICIAL E SAÚDE

THE CREIGHTON MODEL FERTILITYCARE SYSTEM: A PIONEERING CLINICAL EXPERIENCE IN BRAZIL

Carolina De Souza Delage Faria (carolina@carolinadelage.com)

Thais Amanda Frank De Almeida Alves (thaisfrankalves@gmail.com)

Thaís Fontes De Magalhães (thaisfdemagalhaes@gmail.com)

Mariana Storniolo Sanches Machado (maristorniolo@gmail.com)

Fernanda Abe (abefernanda01@gmail.com)

Alayne Domingues Yamada (dra.alayneyamada@gmail.com)

Carla Ferreira Kikuchi Fernandes (carlakikuchi@gmail.com)

José Maria Cordeiro Ruano (ruano.josemaria@gmail.com)

Marair Sartori (marair.sartori@uol.com.br)

Introduction: Infertility remains a pervasive global public health challenge, associated with profound psychosocial and economic burdens. While Assisted Reproductive Technologies (ART) are prevalent, they often entail significant costs and potential maternal-fetal risks. In this context, Restorative Reproductive Medicine, particularly NaProTECHNOLOGY (NPT), offers a physiology-driven

alternative aimed at diagnosing and treating underlying reproductive pathologies. Central to NPT is the Creighton Model FertilityCare System (CrMS), a highly standardized, biomarker-based methodology. Despite its international validation, the clinical application and epidemiological footprint of CrMS in Brazil remain largely uncharted. Objective: To characterize the clinical and epidemiological profile of a pioneering Brazilian cohort utilizing CrMS and NPT and to establish a high-fidelity, longitudinal clinical database for restorative fertility management. Methods: This large-scale observational study involves the systematic analysis of approximately 3,000 medical records from a specialized center, the landmark site for CrMS methodology in Brazil. Data extraction follows a rigorous protocol designed to capture demographic variables, reproductive history, and clinical indications. To ensure data integrity, a comprehensive clinical database was engineered, with a multidisciplinary team trained in strict quality control and standardized data-entry procedures to minimize information bias and maximize analytical reproducibility. Additionally, artificial intelligence–based tools are being incorporated to support data extraction, organization, and validation from clinical records. These tools are designed to assist in structuring unstructured clinical information, improving data completeness, and optimizing the efficiency of database construction, while maintaining expert supervision throughout the process. Results: The curation of this extensive dataset is establishing the first real-world epidemiological baseline for CrMS in Brazil. The ongoing process of data collection and curation allows for the characterization of women using CrMS in a real-world clinical setting. Preliminary analyses focus on describing patient profiles, diagnoses, treatments, and resulting outcomes. The structured database under development will allow for a comprehensive assessment of clinical trajectories and outcomes, particularly those related to fertility. Conclusion: This study represents one of the first systematic efforts in Brazil to characterize women using CrMS and NPT in routine clinical practice. The establishment of a robust clinical database, supported by trained specialists and standardized data collection procedures, using AI, will provide valuable insights into the applicability of NPT and CrMS in reproductive healthcare and may inform personalized fertility management strategies. These findings are expected to contribute to the growing body of evidence supporting individualized, physiology-based approaches to reproductive health.

Palavras-chave: infertility; reproductive health; creighton model system; naprotechnology.