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Hormonal Profile of Women Attending Fertility Clinic in Zaria, North-west, Nigeria

Profil Hormonal des Femmes Fréquentant un Centre de Fertilité à Zaria, Nord-Ouest, Nigeria

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ABSTRACT

BACKGROUND: Infertility affects approximately 186 million people worldwide and 8–12% of couples of reproductive age worldwide. Female infertility remains the commonest gynaecological case attended to in many fertility centres across Nigeria with a national prevalence of infertility between 10–23.6%. The hypothalamic-pituitary-gonadal (HPG) axis of hormonal interplay and organ sensitivity account for about 19% of the cause of infertility in females in Nigeria and the laboratory assessment of the hormones of this axis have been a significant goal standard in the diagnosis as well as treatment.

OBJECTIVES: The study investigated the pattern of the HPG hormones seen in infertile women in a Nigerian fertility treatment centre to identify and classify the causes.

METHODS: A descriptive cross-sectional randomized study of 125 participants was selected and stratified into 47 primary and 78 secondary infertility participants respectively, conducted between Oct 2016 and August 2017. The control participants consisted of apparently healthy women, age-matched. Serum levels of four hormones [luteinizing hormones (LH), follicle-stimulating hormones (FSH), prolactin, and oestradiol] were assayed using the ELISA technique. The data were analyzed using SPSS version 20, p-value ≤ 0.05 was considered significant.

RESULTS: The mean age of infertile women was 30.4 ± 5.8 years. Serum levels of prolactin (10.6 ± 9.3) and oestradiol (301 ± 157.9) were significantly ($p \leq 0.05$) higher among the participants. However, the levels of LH and FSH were similar among the participants and controls ($p = \leq 0.77$ and ≤ 0.07 respectively).

CONCLUSION:

Hyperprolactinaemia and oestradiolaemia are characteristics of secondary female infertility in Nigeria. Laboratory evaluation of the hypothalamic-pituitary-gonadal axis with thyroid hormones cannot be over-emphasized for a proper diagnosis and impact on the treatment of infertility. **WAJM 2023; 40(6): 590–593.**

Keywords: Profile, Reproductive hormones, Infertility.

RÉSUMÉ

CONTEXTE: L'infertilité touche environ 186 millions de personnes dans le monde et 8 à 12 % des couples en âge de procréer. L'infertilité féminine reste le cas gynécologique le plus fréquent dans de nombreux centres de fertilité au Nigeria, avec une prévalence nationale de l'infertilité comprise entre 10 et 23,6 %. L'axe hypothalamo-hypophysio-gonadique (HPG) de l'interaction hormonale et de la sensibilité des organes représente environ 19 % des causes d'infertilité chez les femmes au Nigeria et l'évaluation en laboratoire des hormones de cet axe a été une norme importante dans le diagnostic et le traitement.

OBJECTIFS DE L'ÉTUDE: L'étude a examiné le profil des hormones HPG observées chez les femmes infertiles dans un centre nigérian de traitement de la fertilité afin d'identifier et de classer les causes.

MÉTHODES: Une étude descriptive transversale randomisée de 125 participants a été sélectionnée et stratifiée en 47 participants d'infertilité primaire et 78 participants d'infertilité secondaire respectivement menée entre octobre 2016 et août 2017. Les participants de contrôle étaient des femmes apparemment en bonne santé appariées par l'âge. Les niveaux sériques de quatre hormones (hormones lutéinisantes (LH), hormones folliculo-stimulantes (FSH), prolactine et œstradiol) ont été dosés en utilisant la technique ELISA. Les données ont été analysées à l'aide de SPSS version 20, la valeur $p < 0,05$ a été considérée comme significative.

RÉSULTATS: L'âge moyen des femmes infertiles était de $30,4 \pm 5,8$. Les niveaux sériques de prolactine ($10,6 \pm 9,3$) et d'œstradiol ($301 \pm 157,9$) étaient significativement ($p < 0,05$) plus élevés chez les participantes. Cependant, les niveaux de LH et de FSH étaient similaires chez les participants et les témoins ($p = > 0,77$ et $> 0,07$ respectivement).

CONCLUSION: L'hyperprolactinémie et l'œstradiolémie sont des caractéristiques de l'infertilité féminine secondaire au Nigeria. L'évaluation en laboratoire de l'axe hypothalamo-hypophysio-gonadique avec les hormones thyroïdiennes ne peut pas être trop soulignée pour un diagnostic approprié et un impact sur le traitement de l'infertilité. **WAJM 2023; 40(6): 590–593.**

Mots clés: Profil, Hormones de reproduction, Infertilité.

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