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Effect of Urinary Tract Infections on Hormones at Women in Karbala City

Ashraf Ayyal Mutar Alrashedi[1]*
[1]College of Science, University of Al-Qadisiyah, Al-Qadisiyah, Iraq

Abstract: The current study aims at defining the changes in hormones, related to patient women infected with urinary tract infection in Karbala city. This study has studied 70 blood samples belonged to patient women in Al-hussein educational hospital in karbala. Age is 20-70 years old. The studies samples were compared with 30 blood samples taken from intact women as a control group. Hormonal parameters such as LH, FSH, estrogen, progesterone and testosterone has been measured. The results showed that there is an ideal decrease with LH, FSH and estrogen at the level of (P≤0.05) with patient group compared with the healthy group. The level of progesterone and testosterone concentrations showed an ideal increase with patients compared with the healthy group.

Keywords: Urinary tract infections, Estrogen and progesterone.

Research Paper

***Corresponding Author:**
Ashraf Ayyal Mutar Alrashedi
College of Science, University of Al-Qadisiyah, Al-Qadisiyah, Iraq

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INTRODUCTION

Urinary tract infections are common infections comes after respiratory tract infections and lead to high deaths [1]. Urinary tract infections are considered one of main causes to septicemia [2]. Urinary tract infections occur in any place in urinary tract and conjugated with large numbers of microbes [3]. Urinary tract infections are spread in large percent in community especially in women because of infection one woman between five women if noted can infect of woman one time in life in this infections [4]. UTI can occur by poor hygiene, genetic makeup e.g. the proximity of the anus to the urethra and sexual intercourse [5]. UTI are more public diseases in different countries and depending complexity of infection on structural or functional deviation in urinary system [6]. Urinary tract infections are beginning in Urethritis then Cystitis and finally Ureteritis and usually most infections occur after use of contaminated instruments in hospitals such as urinary stream catheter, Cystoscopy and after extraction or swell prostate gland in male [7]. Long-lasting illnesses like Diabetes, renal failure, Kidney transplantation and presence of casts lead to growth of microorganisms in urinary streams and occur of inflammations [8, 9]. Urinary system one of important instruments in the body, any disorder can effect on other instruments because of association with other organs in regulation volume and components of cellular fluid and serves on removal of poisons wastes from blood [10].

METHODS AND MATERIALS

Groups and Blood Samples Collection

The study done in karbala city in alhussein hospital. The study 30 healthy groups and 70 patients. About 20-70 years old and taken five ml and put in gel tube and put in centrifuge for 5 minute by 5000 rpm to obtain on serum and put in test tubes to purpose of hormonal test.

Hormonal Parameters: LH, FSH, estrogen, progesterone and testosterone Measured by ELISA technique.

Statistical Analysis

The information were existing as mean ±SE and exposed to examination of alteration by using one method ANOVA Post hoc test was used LSD to specify the important change among funds the software package IBM SPSS Program version 20 was used for the examination of information [11].

RESULTS

Table effect of UTI on some of biochemical parameters Mean ±SE

group	LH(IU/I)	FSH(IU/I)	Estrogen (pg/ml)	Progesterone (Ng/ml)	Testosterone (Ng/ml)
Control	**A** 18.25±2.51	**A** 8.25±0.87	**A** 80.17±4.87	**A** 1.65±0.78	**A** 3.44±3.12
Patients	**B** 13.24±1.91	**B** 3.44±0.96	**B** 14.46±3.64	**B** 5.56±1.99	**B** 15.24±2.71

Altered letters symbolize a important change at (p≤0. 05)

DISCUSSION

Current study looked important decrease in LH concentration in patients with UTI in comparison with heathy. This results agreement with [12, 13]. LH hormone secreted before ovulation process by effect high concentrations of estrogen hormone during Progressive response machine, then afterward ovulation process. This hormone repressed by progesterone and estrogen levels during harmful response machine [14, 15], showed that decrease in LH hormone level in women lead to different symptoms such as failure in ovaries, disorder in sleep, change in humor, dry in vagina, pain at sexual intercourse, don't control on urinate and urinary tract infections. Current study looked important decrease in FSH concentration in patients with UTI in comparison with healthy. This results agreement with [16]. FSH hormone decrease at women infected with UTI by effect progesterone hormone during negative feedback mechanism [17], current study looked important decrease in estrogen concentration in patients with UTI in comparison with heathy. This results agreement with [18-22], showed that there are increase in infection ratio in women at menopause because decrease in estrogen hormone level that lead to decrease from adhered of lactobacilli bacteria on surfaces epithelial cells of vagina that participate in penetration of microbes of vagina. Current study looked important rise in progesterone concentration in patients with UTI compared with control. This results agreement with [23-25]. Current study looked important rise in testosterone concentration in patients with UTI incomparsion with healthy. This results agreement with [26, 27], showed increase in testosterone hormone in 60% at women infected with UTI.

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