



CODEN (USA): IAJPBB

ISSN: 2349-7750

INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES<http://doi.org/10.5281/zenodo.375935>Available online at: <http://www.iajps.com>

Research Article

**THYROID DYSFUNCTION IN PATIENT WITH MENSTRUAL
DISTURBANCES: SIX MONTHS MULTIDISCIPLINARY
STUDY****Dr. Zubair Ahmed Yousfani¹, Dr. Jabeen Atta², Dr. Kirshan Lal Soofi¹, Dr. Zulfiqar Ali
Qutrio Baloch^{3*}, Muhammed Ayyaz³ and Munis Raza⁴**¹Department of Surgery, Liaquat University of Medical and Health Sciences (LUMHS)²Department of Gynecology & Obstetrics, Bilawal Medical College, LUMHS Jamshoro³Brandon Regional Hospital, Brandon, Florida⁴Grand Rapids Medical Education Partners, Grand Rapids, Michigan.**Received:** 11 February 2016 **Accepted:** 20 February 2017 **Published:** 28 February 2017**Abstract:****OBJECTIVE:** To determine the frequency of thyroid dysfunction in patients with menstrual disturbances.**PATIENTS AND METHODS:** This multidisciplinary case series study of six months was conducted from Jan 2016 to June 2016 at LUMHS Jamshoro Sindh Pakistan. All the ladies with menstrual disturbances were evaluated for thyroid dysfunction by screen their serum fT3, fT4 and TSH level. The data was collected and analyzed in SPSS 16 while the frequency and percentages (%) was calculated.**RESULTS:** Total fifty ladies with menstrual disturbances recruited and screened for their serum thyroid hormone levels. The means age \pm SD for whole population was 37.87 ± 6.87 while the frequency for thyroid dysfunction was 40 (80%) with hypothyroidism being the predominant disorder 25 (50%). The common menstrual disturbances observed was menorrhagia 20(40%) and oligomenorrhea 15 (20%) respectively.**CONCLUSION:** Thyroid dysfunction should be taken as an important etiological factor for menstrual abnormalities.**Key Words:** Hypothyroidism, Thyroid dysfunction and Menstrual disturbances.**Corresponding Author:*****Dr. Zulfiqar Ali Qutrio Baloch,**

Brandon Regional Hospital,

Brandon, Florida.

Email: zulfiqar229@hotmail.com,

QR code



Please cite this article in press as Zulfiqar Ali Qutrio Baloch et al, *Thyroid Dysfunction in Patient with Menstrual Disturbances: Six Months Multidisciplinary Study*, Indo Am. J. P. Sci, 2017; 4(02).

INTRODUCTION:

Menstrual disorder also called as dysfunctional uterine bleeding (DUB) is an abnormal bleeding from the uterus in the absence of organic genital tract disorders and demonstrable extragenital cause, account for 12% of the gynecology oriented complaints [1-3]. The Thyroid dysfunction is also reported simultaneously both hyper and hypothyroidism are related in a variety of alterations during reproductive function including delayed puberty onset and menstrual cycle disturbance [4-6]. Clinical observations reported that increased menstrual flow to be the common reproductive system abnormality in hypothyroidism [7]. The patients with hypothyroidism require treatment for menorrhagia has not been evaluated carefully [8]. Furthermore majority of the subjects has subclinical hypothyroidism and easily unrecognized or missed [9]. It has been documented that hypothyroidism should have been screen consideration in majority older woman with or without symptoms [10].

The thyroid function testing has a best yield to assess thyroid function and serum TSH assay is a sensitive indicator of thyroid gland function because TSH levels become elevated before falling of circulating serum thyroxine level below the normal range [11,12]. Hence this study was conducted to evaluate the thyroid function in patients with menstrual bleeding abnormalities from puberty to premenopausal age groups, as early screening and detection is interestingly justifiable as far as management for menstrual disturbances is concerned.

PATIENTS AND METHODS:

The multidisciplinary case series study for six months was aimed to evaluate the role of thyroid malfunction in relation to menstrual abnormalities conducted in the department of Obstetrics / Gynecology and surgical department of Liaquat University Hospital Hyderabad. Fifty ladies with menstruation abnormalities (dysfunctional uterine bleeding) from

puberty to pre-menopausal age group during Jan 2016 to June 2016 were recruited for the study after taking informed consent to take part in the study. The dysfunctional uterine bleeding (menstrual abnormalities) includes menorrhagia, metrorrhagia, Oligo and hypomenorrhoea while the subjects already on medications or hormones, known cases for thyroid disorders including malignancies and subjects with known bleeding disorders were excluded from the study.

A detailed clinical history was taken in concerned to age, onset, duration, amount and pattern of bleeding associated complaints in concerned to thyroid dysfunction were also recorded. The clinical examination includes general physical, neck, gynecological and systemic examination was carried out in relation to thyroid abnormalities. All the baseline investigation were advised and all the relevant individuals were screened for free T3, free T4 and TSH by taking 3ml venous blood sample and send to laboratory for evaluation by competitive chemiluminescent immunoassay. The subjects found to have thyroid malfunction were referred to physician or surgeon accordingly for further management. The data was recorded on pre-designed proforma while analyzed in SPSS 16. The frequency, percentages and means \pm SD was calculated.

RESULTS:

During study period total fifty ladies of dysfunction uterine bleeding were assessed for thyroid abnormalities. The mean \pm SD for whole population was 37.87 ± 6.87 while the mean \pm SD for free t3, T4 and TSH was 27.66 ± 6.75 ng/dL, 0.15 ± 1.53 ng/dL and 72.98 ± 4.87 microunits per milliliter. The thyroid abnormalities were detected in 40 (80%) patients while the data regarding demographical and menstrual abnormalities is presented in Table 01 whereas the observed thyroid abnormalities are mentioned in Table 02.

Table 01: Demographical and Clinical Manifestations of Patients with Menstrual Disturbances

AGE (YRS)	N = 50	PERCENTAGE (%)
13-19	05	10%
20-29	10	20%
30-39	20	40%
40-45	15	30%
Total		
MARITAL STATUS		
Married	20	40%
Unmarried	30	60%
PARITY		
0	04	8%
1	06	12%
2	20	40%
3	15	30%
4+	05	10%
MENSTRUAL DISTURBANCES		
Hypomenorrhea	07	14%
Menorrhagia	20	40%
Metrorrhagia	08	16%
Oligomenorrhea	15	30%

Table 02: The Status of Thyroid Gland in Patients with Dysfunctional Uterine Bleeding

THYROID ABNORMALITY	N = 50	PERCENTAGE (%)
Normal (Euthyroid)	10	20%
Hypothyroid	25	50%
Sub-clinical Hypothyroid	10	20%
Hyperthyroid	05	10%

DISCUSSION:

Thyroid dysfunction is marked by large number of menstrual aberrations. In the present study patients were taken from puberty to pre-menopause with majority were in 30-40 years age group. In former study (Kumar HAS. 2017) maximum number of individuals were also belonged to 30 -40 years age group [13]. In present series patients with genital tract organic lesion, history for taking medications / hormones intake, bleeding disorders were excluded and is consistent with former literature (Ajmani NS, et al) [14]. In our series 60% of unmarried ladies had thyroid malfunction while in the study by Poppe K, et al 40% of unmarried ladies had thyroid abnormality [15]. In current series majority of the ladies with thyroid dysfunction were unmarried as compared to the study by Verma I, et al where married ladies were predominant [16]. In the present study the common dysfunction uterine bleeding observed was

menorrhagia consistent with the study by Moragianni VA, et al [17]. In our study the common thyroid abnormality was hypothyroidism and it is again consistent with the former literature Unnikrishnan, AG et al [18]. Even patients had complaints of metropathia giving their thyroid dysfunction as hypothyroidism either profound or subclinical. Subclinical hypothyroidism was observed in 30% ladies with DUB and it is consistent to the study by Deshmukh V, et al [19]. In the current study the oligomenorrhoea was detected in 15 (30%) patients while the study by Krassas GE, et al [20], was also reported oligomenorrhoea. In the study by Kakuno Y, et al oligomenorrhoea was the commonest menstrual abnormality among hyperthyroid patients [21]. In present study the euthyroid was observed in 10 (20%) individuals while they study by Joshi JV, et al was also reported normal thyroid gland function [22].

CONCLUSION:

It was concluded that thyroid dysfunction should be taken as an important etiological factor for menstrual abnormalities. Therefore biochemical assessment of serum FT3, FT4 and TSH should be mandatory in dysfunctional uterine bleeding cases as these patients if given medical treatment can become free from bleeding problems and also from surgical interventions.

REFERENCES:

- Jill Blaser Farrukh, Kellie Towriss, Nora McKee. Abnormal uterine bleeding: taking the stress out of controlling the flow. *Can Fam Physician*. 2015 Aug; 61(8): 693–697.
- Whitaker L, Critchley HOD. Abnormal uterine bleeding. *Best Pract Res Clin Obstet Gynaecol*. 2016 Jul; 34: 54–65.
- Madhra M, Fraser IS, Munro MG, Critchley HO. Abnormal uterine bleeding: advantages of formal classification to patients, clinicians and researchers. *Acta Obstet Gynecol Scand*. 2014 Jul;93(7):619-25.
- Abdel Hamid AM, Borg TF, Madkour WA. Prevalence of hyperprolactinemia and thyroid disorders among patients with abnormal uterine bleeding. *Int J Gynaecol Obstet*. 2015 Dec;131(3):273-6.
- Wormsbecker A, Clarson C. Acquired primary hypothyroidism: vaginal bleeding in a quiet child. *CMAJ*. 2010 Apr 6; 182(6): 588–590
- Brenner PF. Differential diagnosis of abnormal uterine bleeding. *Am J Obstet Gynecol*. 1996 Sep;175(3 Pt 2):766-9.
- Gordon CM, Austin DJ, Radovick S, Laufer MR. Primary hypothyroidism presenting as severe vaginal bleeding in a prepubertal girl. *J Pediatr Adolesc Gynecol*. 1997 Feb;10(1):35-8.
- Rakover Y, Weiner E, Shalev E, Luboshitsky R. Vaginal bleeding: presenting symptom of acquired primary hypothyroidism in a seven year-old girl. *J Pediatr Endocrinol*. 1993 Apr-Jun;6(2):197-200.
- Attia AH, Youssef D, Hassan N, El-Meligi M, Kamal M, Al-Inany H. Subclinical hyperthyroidism as a potential factor for dysfunctional uterine bleeding. *Gynecol Endocrinol*. 2007 Feb;23(2):65-8.
- Bensenor IM, Olmos RD, Lotufo PA. Hypothyroidism in the elderly: diagnosis and management. *Clin Interv Aging*. 2012; 7: 97–111.
- Werhun A, Hamilton W. Are we overusing thyroid function tests?. *Br J Gen Pract*. 2013 Aug; 63(613): 404.
- Carvalho GA, Perez CL, Ward LS. The clinical use of thyroid function tests. *Arq Bras Endocrinol Metabol*. 2013 Apr;57(3):193-204.
- Kumar HSA, Saravanan S. A study of prevalence of thyroid disorders in patients with abnormal uterine bleeding. *Int J Reprod Contracept Obstet Gynecol*. 2017 Mar;6(3):1036-1039
- Ajmani NS, Sarbhai V, Yadav N, Paul M, Ahmad A, Ajmani AK. Role of Thyroid Dysfunction in Patients with Menstrual Disorders in Tertiary Care Center of Walled City of Delhi. *J Obstet Gynaecol India*. 2016 Apr;66(2):115-9.
- Poppe K, Velkeniers B, Glinde D. Thyroid disease and female reproduction. *Clin Endocrinol (Oxf)*. 2007 Mar;66(3):309-21.
- Verma I, Sood R, Juneja S, Kaur S. Prevalence of hypothyroidism in infertile women and evaluation of response of treatment for hypothyroidism on infertility. *Int J Appl Basic Med Res*. 2012 Jan-Jun; 2(1): 17–19.
- Moragianni VA, Somkuti SG. Profound hypothyroidism-induced acute menorrhagia resulting in life-threatening anemia. *Obstet Gynecol*. 2007 Aug;110(2 Pt 2):515-7.
- Unnikrishnan AG, Kalra S, Sahay RK, Bantwal G, John M, Tewari N. Prevalence of hypothyroidism in adults: An epidemiological study in eight cities of India. *Indian J Endocrinol Metab*. 2013 Jul;17(4):647-52.
- Deshmukh V, Behl A, Iyer V, Joshi H, Dholye JP, Varthakavi PK. Prevalence, clinical and biochemical profile of subclinical hypothyroidism in normal population in Mumbai. *Indian J Endocrinol Metab*. 2013 May;17(3):454-9.
- Krassas GE, Poppe K, Glinde D. Thyroid function and human reproductive health. *Endocr Rev*. 2010 Oct;31(5):702-55
- Kakuno Y, Amino N, Kanoh M, Kawai M, Fujiwara M, Kimura M, et al. Menstrual disturbances in various thyroid diseases. *Endocr J*. 2010;57(12):1017-22
- Joshi JV, Bhandarkar SD, Chadha M, Balaiah D, Shah R. Menstrual irregularities and lactation failure may precede thyroid dysfunction or goitre. *J Postgrad Med*. 1993 Jul-Sep;39(3):137-41.