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Research Paper

Impact of Hypothyroidism on Fertility
A study conducted on impact of hypothyroidism on fertility in government general hospital Anantapuramu, Andhrapradesh

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ABSTRACT:- A descriptive study was conducted on impact of hypothyroidism on fertility among 50 women aged 26-40 years at government general hospital Anantapur. All the 50 convenient samples were subjected to detailed history, clinical examination with thyroid profile analysis in which 17[34%} of women are diagnosed with hypothyroidism.10 (58.8%) out of these 17 hypothyroidism women are having infertility. It indicates that there is a hypothyroidism with infertility

Keywords:- hypothyroidism, infertility, thyroid profile, clinical examination

I. INTRODUCTION

Endocrine glands produce chemical substances called hormones and secrete them in to blood where they eventually affect specific target tissues[1]. Thyroid is the highly vascular organ and is regulated by TSH from the anterior pituitary. Iodine is essential for the synthesis of thyroid hormones[6].Thyroid hormones do not have any discrete target organ. They affect cellular of almost all the tissues of the body[7]. The two thyroid hormones, thyroxin(t4)and tri iodothyronine(T3) which helps in growth and development of the body, sexual development, increases basal metabolic rate and reproductive function[6]. Hypothyroidism is associated with a variety of changes in reproductive functions including delayed onset of puberty, menstrual disorders, anovulatory cycles, infertility and reproductive wastage when pregnancy is achieved. Undiagnosed and untreated thyroid disease can be a cause for infertility as well as sub fertility. Thus thyroid dysfunction may have a great impact on fertility in females.[3]

Gronier. H (2011), conducted a study on impact of thyroid function on fertility. He identified that infertile women has being risk for thyroid dysfunction[8].

Poppe. K', Glinoer. D (2012) conducted a study on the role of thyroid autoimmunity in fertility and pregnancy. They identified that the prevalence of thyroid autoimmunity is significantly higher among the infertile women than fertile women.[2]

Shivaleela M Biradar, Poornima R.T (2012) conducted a study on thyroid dysfunction in infertile women in which they conclude that 42% of infertile women are having thyroid dysfunction. So thyroid profile should be kept in consideration during the diagnosis and management of infertility[4].

42 million people in India have thyroid disorders. Hypothyroidism specifically is the most common of thyroid disorders in India affecting 1 in 10 adults. The prevalence of hypothyroidism in India is 11% compared with only 2% in U.K ad 4.6% in U.S.A. in India compared with coastal cities, cities located inland like Kolkata, Delhi, Bangalore and Hyderabad have a higher prevalence of 11.7%. prevalence of hypothyroidism with people aged 18-35 years is 7.5%.[4]

II. STUDY DESIGN AND METHODS

A descriptive study was conducted in government general hospital, Anantapur for 6 months(October 2014- march 2015) on the impact of hypothyroidism on fertility among women. 50 samples were taken by convenient sampling method with aged 26-40 years. All the samples were subjected to detailed history, clinical examination with thyroid profile analysis. Thyroid status was evaluated by measuring serum T3, T4 and TSH.

Descriptive statistical method is used to analyze the data collected. Data is entered and analyzed by using statistical method and tabulated according to the percentage and frequency distribution.

III. RESULTS

The present study includes 50 women aged 26-40 years out of which 20 women(40%) were aged between 26-30 years, 20 women(40%) aged between 31-35 years and 10 (20%) were aged between 36-40 years.

Table -1 Frequency and percentage distribution of age N=50

AGE	FREQUENCY	PERCENTAGE
26-30 YEARS	20	40
31-35 YEARS	20	40
36-40 YEARS	10	20

Thyroid profile of these 50 samples shows that 17 (34%) women were having increased TSH level than normal which reveals hypothyroidism. Out of these 17 women, 2 (10%) belongs to 26-30 years of age, 12(60%) belongs to 31-35 years of age and 3(30%) belongs to 36-40 years of age.

This shows that majority of the women 12(60%) belongs to 31-35 years of age group are having hypothyroidism.

During the clinical examination, 10 (58.8%) of the women were found to be infertile among 17 hypothyroidism women.

Table-2 Thyriod profile analysis N=50

S.NO	AGE(YEARS)	TSH VALUES
1.	**30**	**>150.00**
2.	26	3.24
3.	28	1.14
4.	28	2.2
5.	**28**	**105.21**
6.	28	2.13
7.	26	3.55
8.	27	0.65
9.	29	3.44
10.	26	1.67
11.	26	2.13
12.	27	3.43
13.	26	0.68
14.	28	3.12
15.	26	2.33
16.	26	1.23
17.	27	2.72
18.	28	4.78
19.	26	1.33
20.	28	3.16
21.	**33**	**6.93**
22.	**32**	**13.49**
23.	33	2.61
24.	**34**	**7.45**
25.	**31**	**8.21**
26.	35	3.19
27.	**35**	**5.77**

28.	**32**	**10.03**
29.	34	0.75
30.	**34**	**63.59**
31.	33	1.73
32.	**31**	**13.82**
33.	**35**	**14.17**
34.	32	2.01
35.	**35**	**60.85**
36.	34	0.33
37.	**32**	**13.07**
38.	35	1.7
39.	**34**	**11.7**
40.	31	2.42
41.	**37**	**76.66**
42.	40	4.71
43.	40	4.13
44.	40	0.02
45.	36	2.45
46.	**37**	**10.7**
47.	40	1.13
48.	**40**	**140.1**
49.	40	3.17
50.	38	3.14

IV. CONCLUSION

The study reveals that 17(34%) of women are diagnosed with hypothyroidism. 10 (58.8%) of women are having infertility. Thus it shows that hypothyroidism have influence on fertility of women. This study shows that hypothyroidism screening for all infertile women is essential.

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