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Bangalore city tops the chart in hypothyroidism prevalence

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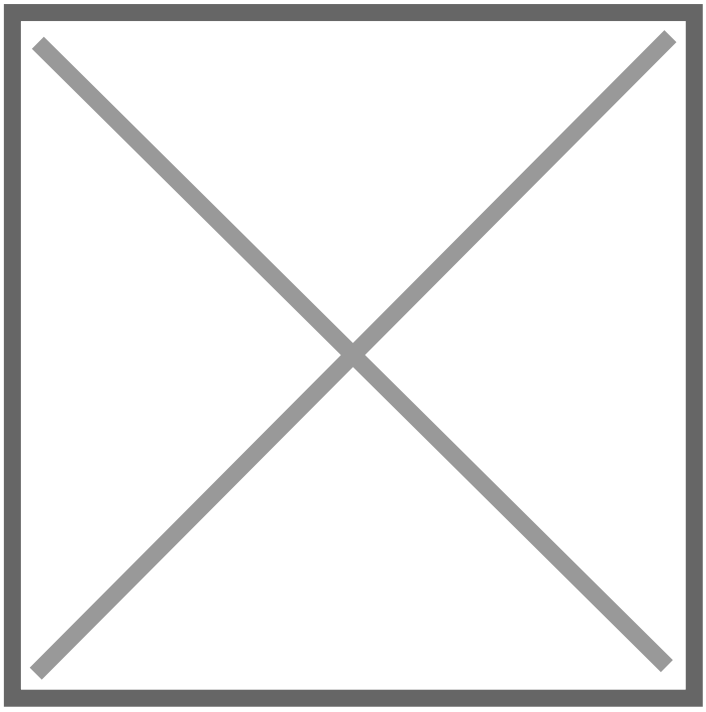

A total of 867 patients were studied out of the 868 who enrolled for the screening in thirteen enrollment camps across Bangalore. Out of which, 9.23 percent of the study population from Bangalore were found to have hypothyroidism, and shockingly, 3.81 percent of the patients were not aware of their hypothyroidism condition.

The study findings were revealed on November 18, 2013, by Abbott India, as published in the July 2013 edition of the Indian Journal of Endocrinology and Metabolism.

Dr Arun Vadavi, consultant physician - 'Sudha' The Prevention Centre, Bangalore, and study investigator for Bangalore, and Dr A G Unnikrishnan, principal investigator of the study and CEO and endocrinologist, Chellaram Diabetes Institute, Pune, presented the research findings to the audience.

Talking about hypothyroidism symptoms, Dr Unnikrishnan added, "The common symptoms in hypothyroidism includes weight gain, dry skin, tiredness & fatigue, hair loss in women, depression, irregular menstruation, infertility problem in conceiving,and increased cholesterol level, which accelerates heart diseases. Hypothyroidism can be supplemented by thyroid hormone tablets."

Thyroid gland is a butterfly-shaped gland producing two kinds of hormones: T3 and T4. The gland regulates the body's entire energy levels, accesses organs and their functions, maintains body's growth and development, and as well as coordinate with other hormones.

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The thyroid gland is controlled by the pituitary gland, a master gland which controls other glands in the body. When the thyroid gland fails, the pituitary gland produces TSH (Thyroid Stimulating Hormone) in excess. The best way to detect hypothyroidism is by measuring the TSH.

In the past, people believed that Iodine deficiency alone caused hypothyroidism. Iodine is an element which the thyroid gland requires to make thyroid hormone. However, the intake of iodine in coastal regions does not guarantee an escape route to hypothyroidism. In hypothyroidism, the thyroid gland is under active as opposed to hypothyroidism.

"The primary aim of the research was to assess 8 cities including Bangalore, Chennai, Delhi, Goa, Mumbai, Hyderabad, Ahmedabad and Kolkata. The seconday aim was to find the incidence of known and unknown cases of hypothyroidism, and also to find the prevalence of thyroid anti-bodies (Anti-TPO) in the study population," added Dr Unnikrishnan.

Anti-TPO are self generated anti-bodies which can damage the thyroid gland and increase the future risk of thyroid diseases.

About 5360 people above 18 years of age across India were studied in the research. About 88 percent of them have been consuming iodized salt. In the enrolled population, 54.7 percent were females and 45.3 percent were males.

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In the study, 11 percent of the population was found to have hypothyroidism. Out of which, one-third (3.47 percent) of the patients did not know that they had the disease compared to 7.48 percent who knew. One in ten adults in urban India were found to have hypothyroidism.

Hypothyroidism affects all age groups, but it is more common between 46-54 years age group said the study. Women were found to be affected three times more than men for scientifically unproven reasons. Hormonal diseases are more common in women. The thyroid gland inefficiency in women can lead to irregular periods, infertility and weight gain. In pregnant women, this can be detrimental for the babies.

Dr Unnikrishnan concluded by saying, "We now need to look at why hypothyroidism is so common in the country. Many doctors are aware and diagnosis is becoming common. The public is also increasingly becoming aware. We should start screening aggressively for hypothyroidism in the population. Importantly, regular monitoring has to be done. Thus, awareness, early testing & diagnosis and treatment will go a long way."

Commenting on the major challenges in the diagnosis of hypothyroidism, Dr Arun Vadavi, said, "Symptoms of hypothyroidism is confused with other disorders, and it is the most under diagnosed disorder in India. If untreated, the cholesterol levels elevate thereby increasing blood pressure leading to cardiovascular diseases."

Currently, there is no permanent cure for thyroid disorders. "But with medication and precise treatment, thyroid disorders can be controlled and patients can lead a normal life. Women and pregnant mothers need to be given more attention because they are more susceptible as the offspring's life is severely endangered," Dr Vadavi expressed.

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Comparing Bangalore's findings with national results, Bangalore had 9.23 percent of confirmed cases of hypothyroidism as compared to national level reading of 10.95 percent. In Bangalore, self reported hypothyroidism reached 5.42 percent and nationally it was found to be 7.48 percent. In Bangalore, 3.81 percent of the population were not aware of their hypothyroidism condition compared to 3.47 percent nationally.

Dr Unnikrishnan also said, "Management of the disease is simple and economical. The treatment and testing has become economical but it requires awareness in the society. Aggressive screening approach is required for high risk groups like older population, pregnant women and diabetic patients."

In a series of questions imposed by *BioSpectrum India*, Dr A G Unnikrishnan replied with the following answers:

If the same study were to be carried out in Tier I & Tier II cities and rural areas, what do you think would have been the findings?
One can only speculate. There is no evidence at this point. I guess it can either be more or less compared to our current findings, which is only applicable to urban cities, and we can't extend the results to the rural areas.

Why do you think there is minimal awareness among people on hypothyroidism?
Hypothyroidism is a silent disease, which is insidious and slow. People usually gain weight, lose hair, have irregular periods, constipate and suffer depression, which is considered as part of life. People tend to adjust and live with the disease without being aware of it. Diabetes, CVDs and blood pressure are all well known chronic ailments. But people need to also be aware of hypothyroidism diagnosis and treatment.

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Why are women more susceptible to hypothyroidism?
We do not know the exact reasons why this is common among women. It is common among women across the world and not just in India. Women go through several cycles, and their life has multiple hormonal change cycles right from menstruation and pregnancy to menopause. As a result of these hormonal changes, women maybe more prone to it.

Population above 35 years were found to be at higher risk. Why is this?
Auto-immune diseases increase with age. So we do not know the exact reasons for it.

Do patients need to be on treatment for the rest of their lives?
In general, when the thyroid gland fails, patients require replacement through out their lives, and it has to be monitored regularly. At times, the thyroid gland begins showing improvement and so the treatment has to be moderated accordingly. It is a 'long-term' treatment process.

Were there any collaborations involved in this study?
We didn't have any outside collaborations. We had a single community of experts and doctors. It was carried out purely by national experts who did the study and oversaw it, so that the results were representative of the population.

What about hypothyroidism in babies and children?
In India, 1 out of 2700 babies are born with congenital hypothyroidism and it is very common in India. Around the world, 1 in 3200 new born babies have this condition. In general, most developed countries mandatorily screen babies for hypothyroidism on the third 3rd day right after the babies birth. In India, babies need to be screened earlier in similar way, otherwise they can develop brain disorders which can hamper their mental growth and development.