

Hyperthyroidism in Indonesian community: a mini review

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Laurentia Mihardja, Muhammad Karyaana
National Institute of Health Research and Development,
Indonesia**Correspondence:** Laurentia Mihardja, National Institute of Health Research and Development, Jakarta, Indonesia,
Tel 08164824173, Email laurentialitbang@yahoo.com**Received:** November 15, 2018 | **Published:** March 18, 2019

Abstract

Community based research on hyperthyroidism in Indonesia was still a little. In 2007, based on Indonesian Basic Health Research, the prevalence of hyperthyroidism in urban was 6.9% (with TSH cut-off level <0.55mIU/L). Education in community about hyperthyroidism is still less in Indonesia and must be increased.

Keywords: hyperthyroidism, prevalence, etiology, Indonesian

Introduction

Hyperthyroidism is a clinical condition caused by increased synthesis and secretion of hormones by the thyroid gland which affects the entire body with high metabolism. The presenting symptoms are not specific, so difficult to diagnose hyperthyroidism in its early stages without the aid of laboratory data. We did the literature review from searching PubMed and Google scholar using the search terms "hyperthyroidism prevalence or etiology or guideline.

Prevalence

Community based research on hyperthyroidism in Indonesia was still a little. In 2007, based on Indonesian Basic Health Research, the prevalence of hyperthyroidism in urban was 6.9% (with TSH cut-off level <0.55 mIU/L).^{1,2} Furthermore based on National Health Survey 2013 in the population at aged 15 years and above, by interviewing 722,329 respondents whether diagnosed hyperthyroidism or not by the doctors, were obtained the prevalence of hyperthyroidism in urban rural was 0.4%, which urban (0.5%) was more than rural (0.4%), higher in high economic (0.5%) than low (0.3%) and aged >45 years (0.5%) more than age <45 years (0.4%).³

Hyperthyroidism was not included in the 20 leading causes of death at all ages in Indonesia just as in the world,⁴ so hyperthyroid is not as popular as coronary heart disease or stroke which is the main causes. In UK and US thyroid disease were common in females, affecting around 2% of women and 0.2% of men.^{5,6} Vander pump MPJ et al⁷ based on the data from screening large population samples from USA and Europe found the prevalence of hyperthyroidism in women was between 0.5 and 2%, and was 10 times more common in women than in men in iodine-replete communities.⁷ Tahir MB et al found hyperthyroidism at age group from 25-34 years was the most frequent.⁸ Das A et al found the prevalence of hyperthyroidism in Manipur area (India) was 13.7%, women more than man.⁹ Women are more desirable to different hormonal leaps, their body is very sensitive to any hormonal changes than male body.⁹ The prevalence of hyperthyroidism depend on ethnic, geographic, and environmental factors, which include the iodine intake status.¹⁰

Etiology

Research about the causes of hyperthyroid in Indonesian community has not been done, but has been known Grave's Disease that an autoimmune disease is the most cause of hyperthyroid in the world.

Graves' hyperthyroidism is caused by genetic (80% of susceptibility) and environmental (20% of susceptibility) factors, including smoking, infection, stress and pregnancy.⁶ Smoking and exposure of cigarette smoke are more susceptible for Grave's Disease and need attention due to the prevalence of daily smoking in Indonesia was high at 24.3%.³ Less commonly, other causes of hyperthyroidism include: Thyroid nodules, Subacute thyroiditis, Lymphocytic thyroiditis and Postpartum thyroiditis.¹⁰

Guidelines about diagnosis and therapy

The guidelines were developed by The Indonesian Society of Endocrinology Task Force on Thyroid Diseases for diagnostic evaluation, therapy and management of hyperthyroidism in the adult population.¹ Education in community about hyperthyroidism is still less in Indonesia and must be increased.

Conclusion

The prevalence of hyperthyroidism in urban Indonesia was 6.9%. Smoking and exposure of cigarette smoke are more susceptible for Grave's Disease was high at 24.3%. The guidelines about hyperthyroidism were developed by The Indonesian Society of Endocrinology Task Force on Thyroid Diseases.

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Conflicts of interest

The authors have no conflicts of interest to disclose.

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