

CHAPTER I

INTRODUCTION

1.1. Background

Thyroid disease is the world's second most frequent endocrine condition, after diabetes. Thyroid disease affects almost 300 million individuals globally, yet more than half of them are unaware of it (Crosby *et al*, 2016). In Southeast Asia, the prevalence of thyroid disease is highest in Indonesia which has a population of 17 million people and According Perkumpulan Endokrinologi Indonesia (Perkeni), thyroid disorders impact 20% of endocrine patients. The most common thyroid conditions include goiter, hyperthyroidism, hypothyroidism, and euthyroidism, which are functional and anatomic disorders (Livin, 2015). According to Riskesdas in 2013, the prevalence of hyperthyroidism in Indonesia was around 0.4% of the Indonesian population aged over 15 years, while, according to Riskesdas in 2007, the prevalence of hypothyroidism in Indonesia is still not known with certainty (Pusdatin, 2015). On the other hand, goiter and tumor can affect the vast majority of euthyroid patients. In addition, a study conducted by Assagaf et al in 2015, stated that the results of thyroid function tests in patients with non-toxic multinodular goiter showed that 21 patients were euthyroid from 25 cases (84%). It was also found that the prevalence of thyroid disease in benign and malignant tumors was highest in follicular adenoma (17.8%) and papillary carcinoma (62.7%) (Crosby et al, 2016). However, data on thyroid disease in Indonesia, particularly at Dr. Soetomo's Endocrine Clinic, is currently lacking.

The thyroid gland is a massively powerful organ whose functions affect the entire body. Thyroid disease might have been an underlying disease leading to death, even though it's not the primary cause of death (Beynon and Pinneri, 2016). According to the American Thyroid Association, 60% of people with thyroid disease are completely unaware of their medical condition. Inappropriate hypothyroidism treatment leads to a progression of the disease and if left untreated, it can lead to a coma or even death (Patil, Rehman, and Jialal, 2021). In a study conducted by Lillevang-Johansen et al in 2017, said that mortality in hyperthyroidism may increase in both treated and untreated hyperthyroidism. In 2021, American Thyroid Association also estimated about 2.200 deaths due to thyroid cancer. With morbidity and mortality data, prevention and control measures may be carried out more precisely and the incidence of thyroid disease can be reduced.

The classification of thyroid disease was based on the clinical conditions euthyroidism, hyperthyroidism, and hypothyroidism, which represent normal, excessive, or deficient amounts of thyroid hormones (Monaco, 2003). Each thyroid disease has a different classification and has the most common cause. According to the most common cause, hyperthyroid can be classified into Graves' disease, toxic multinodular goiter, and toxic adenoma. While Hypothyroidism can be classified into Hashimoto's disease and congenital hypothyroidism. In addition, euthyroidism also can be divided into 2 types, namely benign and malignant. One of the classifications of benign thyroid tumors is an adenoma, while malignant thyroid tumors can be further classified into papillary, follicular, anaplastic, and medullary thyroid carcinoma. In addition to being the most common, hyperthyroidism and hypothyroidism can

also lead to Thyroiditis, including Subacute Thyroiditis and Postpartum Thyroiditis. Furthermore, malignancy of the thyroid gland can also be thyroid lymphoma.

Based on the information above, there is a lack of data regarding the thyroid disease in Indonesia. Therefore, it is necessary to conduct research on the profile of thyroid disease at the Endocrine Clinic, Dr. Soetomo General Academic Hospital with the aim of increasing knowledge about thyroid disease and assisting in improving prevention in order to reduce the prevalence in patients with thyroid disease at the Endocrine Clinic, Dr. Soetomo.

1.2. Formulation of the problem

What is the profile of thyroid disease at the Endocrine Clinic, Dr. Soetomo General Academic Hospital period January 2019 - December 2020.

1.3. Research Purposes

1.3.1. General Purposes

To know the profile of thyroid disease at the Endocrine Clinic, Dr. Soetomo General Academic Hospital period January 2019 - December 2020.

1.3.2. Specific Purposes

1. To know the distribution and frequency of age in patients with thyroid disease at the Endocrine Clinic, Dr. Soetomo General Academic Hospital period January 2019 - December 2020.
2. To know the distribution and frequency of gender in patients with thyroid disease at the Endocrine Clinic, Dr. Soetomo General Academic Hospital period January 2019 - December 2020.
3. To know the profile of thyroid disease at the Endocrine Clinic, Dr. Soetomo General Academic Hospital period January 2019 - December 2020 based on

hyperthyroidism.

4. To know the profile of thyroid disease at the Endocrine Clinic, Dr. Soetomo General Academic Hospital period January 2019 - December 2020 based on hypothyroidism.
5. To know the profile of thyroid disease at the Endocrine Clinic, Dr. Soetomo General Academic Hospital period January 2019 - December 2020 based on euthyroidism.
6. To know the profile of thyroid disease at the Endocrine Clinic, Dr. Soetomo General Academic Hospital period January 2019 - December 2020 based on thyroiditis.

1.4. Research Benefits

1.4.1. Academic Benefits

This research is expected to improve understanding and provide new data regarding the profile of thyroid disease at the Endocrine Clinic, Dr. Soetomo General Academic Hospital period January 2019 - December 2020.

1.4.2. Practical Benefits

This research is conducted to determine the thyroid disease that most often occurs at the Endocrine Clinic and to establish additional data for the Dr. Soetomo General Academic Hospital period January 2019 - December 2020.