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Clinical and Cytology Description of Various Neck Lumps in Madani Medan Hospital

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ABSTRACT

This study aims to determine the clinical and cytological features of various neck lumps. This study used a descriptive observational method with a cross-sectional approach to determine the clinical and cytological features of various neck lumps. This study used secondary data from patients with indications of a neck lump who were undergoing treatment or examination at the Medan Madani Hospital in 2018 - 2019. The population in this study were all patients with symptoms and positives experiencing a lump in the neck, at Madani Hospital Medan. Data processing is carried out after the observation and recording of medical record data is in accordance with what is needed, the data obtained are tabulated and coded for later analysis. The results of this study indicated that respondents who experienced thyroid nodules were more dominant in female respondents with a total of 11 respondents, with the most common type of thyroid nodule adenoma follicular thyroid, namely 9 respondents of the female gender. Respondents who experienced inflammation were dominated by female respondents with a non-specific chronic inflammation process on the right side of the neck with a total of 10 respondents with a percentage of 23.8%.

1. Introduction

In today's modern era, with an increasingly modern lifestyle, there are many advantages that we can get, but there are also many weaknesses that we can feel if we can't put all of them in their proper place. It seems that from the lifestyle we live in today, with high mobility, it is not uncommon for us now to neglect a lot of our own health, for example in food, with a wide variety of types of food that are increasingly being encountered on the market without us knowing. the procedure or how to produce it with high curiosity to try it, then that's where we are risking our health because there are many possibilities if we consume foods that currently contain a lot of flavoring ingredients, so it's not surprising that at this time There are so many diseases that can be caused by us consuming these foods, apart from food, it can also be caused by various viruses which maybe our immune system unable to ward off the virus.[1,2]

Today's degenerative diseases have become the main focus of the world of health. One of the degenerative diseases that has become polemic in society is cancer. Apart from the complex etiology, namely the combination of genetic, lifestyle, and environmental factors, it is also caused by the need for comprehensive services to maintain the quality of life and prevent disabilities. Based on the World Cancer Report WHO 2014 the incidence of thyroid cancer is increasing globally. This trend coincides with an increase in the detection and screening of thyroid nodules, particularly regarding the detection of papillary micro-carcinoma.[3]

In general, the enlargement of the thyroid gland is

referred to as a goiter. Goiter is the most common feature of thyroid disorders. Goiter can occur due to prolonged hormone deficiency. This situation causes compensation in the form of an increase in TSH which stimulates the enlargement of the thyroid gland by causing hyperplasia and hypertrophy epitel follicular. This causes an increase in thyroid hormone levels to compensate for the deficiency of these thyroid hormones. Thus, the morphological features of goiters are diffuse and nodular. The degree of enlargement of the thyroid gland is proportional to the level and duration of thyroid hormone deficiency. [4,5]

Most of the primary thyroid tumors originate from the follicular epithelium and some originate from parafollicular C-cells. Benign thyroid tumor in the form of follicular adenoma. Meanwhile, the most common malignant tumor from the thyroid is thyroid carcinoma, although what is very rare in the form of lymphomas and sarcomas can also be found.[4,5]

A follicular adenoma is a benign thyroid tumor that is often found, especially in adult women. Clinically, these tumors are found as solitary nodules and are present in about 1% of the population. Meanwhile, 95% of thyroid cancers are thyroid carcinomas and the remaining less than 5% are Primary Thyroid Lymphomas which occur due to the development of autoimmune thyroiditis and a very rare thyroid sarcoma. Thyroid carcinoma is also most common in women and 2 times more common in women. There are 4 types of thyroid carcinoma, namely papillary (75-80%), follicular (10-20%), medullary, and anaplastic (5%).[6]

Most of the patients with follicular adenoma show a euthyroid state. Only about 1% of follicular adenoma cases show a hyperthyroid state (Toxic adenoma) thus showing a clinical picture of hyperthyroidism. Hyperthyroidism is usually asymptomatic unless the size of the adenoma is ≥3 cm. Meanwhile, the incidence of follicular adenoma from clinical autopsy data was 3-4.3%.

The ratio of the incidence of follicular adenoma compared to follicular carcinoma is 5 to 1. Another study conducted by Kishandan Prasad (2018) reported that the majority of cases of solitary thyroid nodules (goiter) at the Prathima Institute in Karimnagar Medical Sciences from October 2010 to September 2012 were cases of follicular adenoma. confirmed through histopathological examination, namely 43% of cases of 70 cases.[7]

Thyroid cancer is a neoplasm that is relatively rare in the world, but it is a malignancy that is often found among malignancies in the endocrine system between 1 - 1.5% in all new cases in the USA. In 2012 an estimated 230,000 new cases of thyroid cancer occurred, of which 70,000 were men, with an age-standardized incidence rate of 6.1 per 100,000 in women and 1.9 per 100,000 in men. Analysis of the incidence of thyroid cancer internationally is quite difficult to do because of differences in the diagnosis process of the disorder. In some cases, there is a more than 10- fold difference in incidence in different regions of the world for women, with the highest incidence (more than 10 days per 100,000 women) in countries in North and South America, Italy in Europe, Japan, and the Pacific Islands. In addition, the incidence rate of thyroid cancer is also 2 times higher in countries with high per capita income compared to countries with low per capita income.[8,9]

In the general population, 4-7% of thyroid nodules can be found palpable (palpable) and about 70% of thyroid nodules cannot be found by palpation (nonpalpable). Thyroid nodules are far more benign manifestations (90-95%) which include various types of lesions than malignant manifestations Clark and Faquin, (2010). The gold standard for diagnosing thyroid cancer is postoperative histopathological examination. The high incidence of benign thyroid nodules and a low rate of malignancy make it a clinical dilemma on how to manage the many patients with thyroid nodules which are mostly benign manifestations. Postoperative histopathological examination, in this case, is not effective. Apart from epidemiological evidence, the invasive examination technique will reduce the comfort aspect of the patient. The high cost of surgery for some patients also shows that histopathological examination is not applicable in some layers of health care. An earlier diagnosis method is needed to differentiate thyroid nodule patients with malignant manifestations from

most thyroid nodules with benign manifestations.[10]

Inside the neck, on both the right and left sides, there are many tissues, muscles, blood vessels, nerves, and lymph nodes. In addition, there are other important organs in the neck, such as the thyroid and parathyroid glands. If these organs are damaged, they can become enlarged to cause a lump in the neck, the lump not only appears on the right side of the neck but can also be on the left or even on both sides of the neck.

One of the diseases we may experience is such as the occurrence of a lump in the neck which can be caused by several factors, such as food, viruses, family genes, and others. One of them is thyroid nodules, thyroid nodules are endocrine neoplasia that is most often found in clinics, which are superficial, so thyroid nodules can easily be detected either through physical examination or by using various kinds of diagnostics such as laboratory examinations, ultrasound examinations, thyroid scanning examinations. / thyroid prints. FNAB (Fine Needle Aspiration Biopsy) examination, and histopathological biopsy examination. Thyroid nodules are generally benign. The reported prevalence of nodular thyroid disease depends on the population studied and the method used to detect nodules. The incidence increases with increasing age and the incidence rate in women with risk factors for iodine deficiency and after exposure to nodules. Of particular concern to the clinic is that about 5% of the nodules that are palpable may be malignant, in addition to patient complaints such as discomfort due to mechanical pressure of the nodule on surrounding organs and cosmetic problems. So a specific enough screening test is needed to detect malignancy considering that the possibility is only about 5% of the nodules found in Masjhur's clinic, (2009).

The definitive diagnosis of a thyroid gland lump is by histopathological examination of the tissue obtained from surgical excision and examined under a microscope by a cytologist. From the description above, the researchers wanted to examine the clinical and cytological features of various neck lumps at Madani Hospital Medan in 2018 - 2019.

2. Methods

This study used a descriptive observational method with a cross-sectional approach to determine the clinical and cytological features of various neck lumps. This study uses secondary data from patients with indications of a neck lump who is undergoing treatment or examination at the Medan Madani Hospital in 2018 - 2019. The population in this study were all patients with symptoms and positives experiencing a lump in the neck, at Madani Hospital Medan. The sample in this study were patients with indications and positivity for experiencing a lump in the neck, at Madani Hospital Medan for the period 2018 - 2019 who had medical records.

3. Results and Discussion

Respondent characteristics

Gender

In this study, the researchers took a sample of respondents who were male and female for respondents who suffered from thyroid nodules and respondents who suffered from inflammation, to see the number of each gender we can see in the table below. From the sex frequency distribution table above we can see that from a total of 57 respondents in this study, there were 4 respondents who suffered from male gender thyroid nodules, with a percentage of 26.7% female respondents. as many as 11 respondents, with a percentage of 73.3%. Respondents with inflammation sufferers can be seen in Table 2 which shows that respondents with male gender were 10 respondents with a percentage of 23.8%, then for respondents with female gender totaled 32 respondents, with a percentage of 76.2%.

Age

In the following, we can see a table of the frequency distribution of respondents by age for respondents with thyroid nodules, and respondents with inflammation patients. From the age table 3 above, we can see that the lowest age for respondents who suffer from thyroid nodules is 19 years of age as many as 1 person with a percentage of 6.7, for the oldest age of respondents who suffer from thyroid nodules are respondents aged 65 years as much as 1

respondent with a percentage of 6.7%. The age distribution of respondents suffering from inflammation, we can see in table 4. From a total of 42 respondents who suffered from inflammation, the age of the easiest respondent was 9 years, namely 1 respondent with a percentage of 2.4%, then the age of the oldest respondent who suffered from inflammation was 68 years old with the number of respondents as many as 1 respondent, with a percentage of 2.4%, of the people with inflammation of the respondents who experienced the most inflammation based on age, namely at the age of 19 years and 26 years, of which 4 respondents respectively with a percentage of 9.5%. In this study, we want to see the clinical and cytological picture of various neck lumps in Madani Hospital Medan in 2018 - 2019. From the results of research that has been done through patient data collection at Madani Hospital Medan with medical records, the results can be seen in the following table.

Thyroid nodules

The results of thyroid nodule disease suffered by respondents are shown in the table below. Table 5 explains that in patients with thyroid nodules, there are 2 parts, namely thyroid follicular adenoma and benign colloid nodule, in this study 11 respondents who suffered from thyroid follicular adenoma were 73.3%, and respondents who suffered from benign thyroid nodules Colloid nodule as many as 4 respondents with a percentage of 26.7%. In addition, to further clarify the relationship between respondents and thyroid nodules, the following will explain the relationship between sex and thyroid nodules.

Relationship between sex and thyroid nodules

The following results can be seen from the relationship between sex and thyroid nodules based on the type of thyroid nodule, namely thyroid follicular adenoma with the benign colloid nodule. Table 6 Describes the relationship between sex and thyroid nodules, from the results of the research that has been done we can see that the male sex who suffers from thyroid nodule follicular adenoma thyroid is 2 respondents, with a percentage of 13.3%, for There were 2 men who suffered from benign colloid nodule thyroid nodules with a percentage of 13.3%. Meanwhile, for respondents of the female gender who experienced thyroid nodules, follicular adenoma of the thyroid, there were 9 respondents with a percentage of 60%, and women who experienced benign colloid nodule thyroid nodules were 2 respondents, with a percentage of 13.3%. From these results, we can see that women are more prone to suffer from thyroid nodules, and follicular adenoma of the thyroid, compared to male respondents.

Inflammation

The results of the inflammatory diseases suffered by respondents are shown in the table below. Table 7 above explains the number of respondents who suffer from inflammatory diseases, for respondents of the male gender there are 10 respondents with a percentage of 23.8%, then for the female sex who suffer from inflammation, there are 32 respondents with a percentage of 76.2% of the total number of respondents suffering from inflammation, amounting to 42 respondents.

Relationship between sex and inflammation

In the following, we can see the results of research that show an association between sex and inflammation. Table 8 describes the relationship between sex and people with inflammation, from the results of the research that has been done we can see in the table that for respondents who are male and the acute inflammation process is 3 people with a percentage of 7.1%, male with a non-specific chronic inflammation process totaled 4 respondents, with a percentage of 9.5%, 2 respondents with a specific chronic inflammation process with a percentage of 4.8%. For respondents of the female gender who experienced inflammation with an acute inflammatory process as many as 6 respondents with a percentage of 14.3%, women with non-specific chronic inflammation processes were 15 people with a percentage of 35.7%, women with specific chronic inflammation processes totaled 12 respondents with

a percentage of 28.6%. These results indicate that there are more respondents who are female who suffer from inflammation and are dominated by a non-specific chronic inflammation process, amounting to 15 respondents, with a percentage of 28.6%.

Relationship between sex and inflammation and the position of inflammation

The inflammation suffered by each patient, they have different locations, such as those located on the right side of the neck, and some are located on the left side of the neck, here is a table of the results of studies that have been carried out based on gender, inflammation, and location of the inflammation. The relationship between gender and inflammation and the location of the position of inflammation suffered by the respondent, from the results of research that has been conducted at Madani Hospital Medan, it can be seen that for male respondents with a process of acute inflammation in the neck on the right as many as 1 respondent with The percentage was 2.4%, for men with an acute inflammatory process who was on the left neck as many as 2 respondents with a percentage of 4.8%, male respondents with a non-specific chronic inflammation process who was on the right side of the neck as many as 3 people with a percentage of 7.1%, then men with a non-specific chronic inflammation process with inflammation on the left neck as many as 1 respondent, with a percentage of 2.4%, then for male respondents with a specific chronic inflammation process located on the right side of the neck as many as 1 respondent, with a percentage of 2.4%, for male respondents with kro inflammation process 1 respondent with specific location of inflammation in the neck on the left, with a percentage of 2.4%. There were 2 female respondents with an acute inflammatory process located on the right side of the neck, with a percentage of 4.8%, then for female respondents with an acute inflammation process located on the left side of the neck were 4 respondents, with a percentage of 9.5 %, women with a non-specific chronic inflammation process located on the right side of the neck were 10 respondents with 23.8%, then for female respondents with a non-specific chronic inflammation process located on the left side of the neck were 6 respondents with a percentage of 14, 3%, for female respondents with a specific chronic inflammation process located on the right side of the neck were 6 respondents, with a percentage of 14.3%, and the last for female respondents with a specific chronic inflammation process located on the left side of the neck were 5 people respondents with a percentage of 11.9% of the total respondents who experienced inflammation which amounted to 42%.

Table 1. Gender distribution of thyroid nodules respondents

Gender	Frequency	
	N	%
Male	4	26.7
Female	11	73.3
Total	15	100

Table 2. Distribution of inflammation respondents' gender

Gender	Frequency	
	N	%
Male	10	23.8
Female	32	76.2
Total	42	100

Table 3. Age distribution of thyroid nodules respondents

Total	Frequency	
	N	%
19	1	6.7
20	1	6.7
22	1	6.7
30	1	6.7
35	1	6.7
37	1	6.7
43	1	6.7
47	1	6.7
51	1	6.7
53	1	6.7
54	2	13.3
58	1	6.7
60	1	6.7
65	1	6.7
Total	**15**	**100**

Table 4. Age distribution of inflammatory respondents

Age	Frequency	
	N	%
9	1	2.4
13	1	2.4
16	2	4.8
17	1	2.4
18	3	7.1
19	4	9.5
20	1	2.4
21	1	2.4
22	3	7.1
24	1	2.4
25	2	4.8
26	4	9.5
27	1	2.4
28	2	4.8
30	1	2.4
31	1	2.4
32	2	4.8
33	1	2.4
34	1	2.4
38	1	2.4
39	1	2.4
42	2	4.8
45	1	2.4
51	1	2.4
53	1	2.4
63	1	2.4
68	1	2.4
Total	**42**	**100**

Table 5. Number of patients with thyroid nodules

Types of Thyroid Nodules	Frequency	
	N	**%**
Thyroid Follicular Adenoma = Female Benign Colloid Nodule = Male	11 4	73.3 26.7
Total	15	100

Table 6. Relationship between sex and thyroid nodules

Gender * Thyroid nodule	Frequency	
	N	%
MEN - MEN = Thyroid Follicular Adenoma	2	13.3
MALE - MALE = Benign Colloid Nodule	2	13.3
FEMALE = thyroid follicular adenoma	9	60
WOMAN = Benign Colloid Nodule	2	13.3
Total	15	100

Table 7. Gender of inflammation patients

Type of Thyroid nodule	Frequency	
	N	%
Male	10	23.8
Female	32	76.2
Total	42	100

Table 8. Relationship between sex and people with inflammation

Gender * Thyroid nodule	Frequency	
	N	%
MALE - MALE = Acute Inflammation Process	3	7.1
MALE - MALE = Non Specific Chronic Inflammatory Process	4	9.5
Male - Male = Specific Chronic Inflammatory Process	2	4.8
WOMEN = Acute Inflammation Process	6	14.3
WOMEN = Non-Specific Chronic Inflammatory Process	15	35.7
WOMEN = Specific Chronic Inflammatory Process	15	28.6
Total	15	100

From the results of research that has been done on the relationship between sex and thyroid nodules, we can see that from the medical record data of Madani Hospital Medan, the majority of respondents who suffer from thyroid nodules are female respondents with thyroid nodules, follicular adenoma, thyroid yaiutu as many as 9 respondents, with a percentage of 60%.

An enlarged thyroid nodule or goitre is a common condition and only a small proportion is a neoplasm (5- 10%). The prevalence of thyroid nodules increases linearly with increasing age and iodine deficiency. Overall thyroid nodules are more common in women than in men, with prevalence rates that vary widely, depending on the sensitivity of the method used and the population studied. Boedisantoso in 1993 reported a case of thyroid nodules at dr. Cipto Mangunkusumo Jakarta at 50.3% with a ratio of women: men around 8: 1. 11-13

From the results of the research obtained regarding the relationship between gender and inflammation and the location of the inflammation position in the respondents, we can conclude that the respondents who experienced the most inflammation were female respondents with a total of 33 respondents out of a total of 42 respondents who experienced inflammation, from 33 respondents There were 10 respondents with non-specific chronic inflammation of the right neck, with a percentage of 23.8%.

4. Conclusion

Respondents who experienced thyroid nodules and inflammation were dominated by female respondents with a non-specific chronic inflammation process on the right side of the neck with a total of 10 respondents with a percentage of 23.8%.

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