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Overview Of Risk Factors For Pneumonia In Toddlers At Ibnu Sina Hospital, Makassar, 2022

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ABSTRACT

Pneumonia is inflammation that affects the lung parenchyma. Pneumonia is a clinical syndrome, so it is defined based on clinical symptoms and signs, and the course of the disease. Pneumonia is caused by various microorganisms such as bacteria, viruses and fungi. The risk factors for pneumonia are divided into 2, namely intrinsic and extrinsic. To find out the description of the risk factors for pneumonia in toddlers at Ibnu Sina Hospital Makassar in 2022. This research was conducted using a retrospective approach with descriptive methods using secondary data taken from Ibnu Sina Hospital Makassar and analyzed using excel. Sample selection using total sampling of those diagnosed with pneumonia in toddlers with a total sample of 130 toddlers. The highest incidence of pneumonia in toddlers was in males 67 people (52%), aged 13-24 months 36 people (28%), good nutritional status 96 people (74%), received exclusive breastfeeding 86 people (66%), received complete immunization 115 people (89%), no history of air pollution 98 people (75%). Most of the children suffering from pneumonia in toddlers at Ibnu Sina Hospital in Makassar in 2022 were male, most were 12-36 months old, most had good nutritional status, most received exclusive breastfeeding, most did not receive complete immunization and most had no history of pollution. air.

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INTRODUCTION

Pneumonia is an acute lower respiratory tract infection which is the main cause of morbidity and mortality in children under five years of age, especially in developing countries. Pneumonia in toddlers can cause around 2,500 children to die every day. Statistically, children under five who died worldwide due to pneumonia in 2015 were 16% of all deaths among children under five, namely 920,136 children. Pneumonia is an acute infection that affects lung tissue (alveoli) which can be caused by various microorganisms such as viruses, fungi and bacteria.

Pneumonia is inflammation that affects the lung parenchyma. Although many people agree that pneumonia is an inflammatory condition, it is very difficult to formulate a single, universal definition. Pneumonia is a clinical syndrome, so it is defined based on clinical

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symptoms and signs, and the course of the disease. One of the classic clinical definitions states that pneumonia is a respiratory disease characterized by coughing, shortness of breath, fever, wet crackles, with infiltrates on chest x-ray. Another term that is similar is known, namely pneumonitis, which means more or less the same thing. Many adhere to the understanding that pneumonia is inflammation of the lungs due to an infectious process, while pneumonitis is non-infectious inflammation of the lungs.

METHOD

This research was conducted using a retrospective approach with descriptive methods. This research will be carried out at Ibnu Sina Hospital, Makassar City, South Sulawesi. The research will be conducted in December 2023. This research uses a total sampling technique, where the total population is toddlers aged under 5 years who experienced pneumonia at Ibnu Sina Hospital Makassar in 2022. The population in this study is all toddler patients diagnosed with pneumonia at the hospital. Ibnu Sina Makassar in 2022.

The independent variables used in this research are nutritional status, breastfeeding, gender, child's age, immunization status, air pollution. The dependent variable in this study is pneumonia. The type of data used in this research is secondary data in the form of medical records from toddlers with pneumonia at Ibnu Sina Hospital Makassar. The tool or instrument used in this research is a medical record sheet which contains certain labels that record or record the required data. Data that has been collected from medical records will be processed using Microsoft Excel, then analyzed, then presented in table form to illustrate the risk factors for pneumonia in toddlers at Ibnu Sina Hospital, Makassar in 2022.

RESULT AND DISCUSSION

From the research, there were 130 samples regarding the description of risk factors for pneumonia at Ibnu Sina Hospital, the following results can be stated:

Table 1 Frequency Distribution of Pneumonia Incidents in Toddlers at Ibnu Sina Hospital Makassar in 2022 Based on Gender

Gender	n	%
Man	67	51,50
Woman	63	48,50
Total Toral	130	100,00

Shows the distribution of the frequency of pneumonia incidents in toddlers at Ibnu Sina Hospital Makassar in 2022 based on gender, where the majority occurs in toddlers with males, namely 67 people (51.50%), while 63 females (48.50%).).

Table 2 Frequency Distribution of Pneumonia Incidents in Toddlers at Ibnu Sina Hospital Makassar in 2022 Based on Age Group

Age	N	%
0-12 Months	28	21,50
13-24 Months	36	27,70
25-36 Months	23	17,70

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Age	N	%
37-48 Months	25	19,20
49-60 Months	18	13,80
Total	130	100,00

Shows the distribution of the frequency of pneumonia incidents in toddlers at Ibnu Sina Hospital Makassar in 2022 based on age groups, where toddlers who experience pneumonia are 0-12 months old, namely 28 people (21.50%), then 36 people aged 13-24 months. (27.70%), for those aged 25-36 months there were 23 people (17.70%), then for those aged 37-48 months there were 25 people (19.20%) and for those aged 49-60 months there were 18 people (13.80%).

Table 3 Frequency Distribution of Pneumonia Incidents in Toddlers at Ibnu Sina Hospital Makassar in 2022 Based on Nutritional Status.

Nutritional status	n	%
Enough	2	1,50
Obesity	5	3,80
Overweight	96	73,80
Good	25	19,20
Not enough	2	1,50
Total	130	100,00

Shows the distribution of the frequency of pneumonia incidents in toddlers at Ibnu Sina Hospital Makassar in 2022 based on nutritional status, toddlers who experience pneumonia are 2 people (1.50%) with obese nutritional status, then 5 people (3.80%) are overweight nutritional status. %), for good nutritional status there were 96 people (73.80%), then for malnutrition status there were 25 people (19.20%) and for poor nutritional status there were 2 people (1.50%).

Table 4 Frequency Distribution of Pneumonia Incidents in Toddlers at Ibnu Sina Hospital Makassar in 2022 Based on Exclusive Breastfeeding

Age (years)	
Get exclusive breast milk	0
Not getting exclusive breast milk	0
Total	)0

Shows the distribution of the frequency of pneumonia incidents in toddlers at Ibnu Sina Hospital Makassar in 2022 based on exclusive breastfeeding, where the majority occurred in toddlers who received exclusive breast milk, 86 people (66.20%), while those who did not get exclusive breast milk were 44 people (33, 80%).

Table 5 Frequency Distribution of Pneumonia Incidents in Toddlers at Ibnu Sina Hospital Makassar in 2022 Based on Complete Basic Immunization History

Immunization History	n	%
Complete	115	88,50
Incomplete	15	11,50

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Immunization History	n	%
Total	130	.00,00

Shows the distribution of the frequency of pneumonia in toddlers at Ibnu Sina Hospital Makassar in 2022 based on a history of complete basic immunization, where the majority of pneumonia occurred with toddlers who received complete basic immunization, 115 people (88.50%), while those with incomplete immunization were 15 people (11 .50%).

Table 6 Frequency Distribution of Pneumonia Incidents in Toddlers at Ibnu Sina Hospital Makassar in 2022 Based on Air Pollution

Air pollution	n	%
There is	32	24,60
There isn't any	98	75,40
Total	130	100,00

Shows the distribution of the frequency of pneumonia in toddlers at Ibnu Sina Hospital Makassar in 2022 based on family smoking history, where the majority of pneumonia occurs in toddlers who do not have a family history of smoking, 98 people (75.60%), while those who have a family history of smoking are 98 people. 32 people (24.60%).

Discussion

According to the Indonesian Ministry of Health 2004, it is said that gender is a risk factor for pneumonia. Sunyataningkamto said the gender of a boy is a risk factor that influences pneumonia. This is due to the diameter of the respiratory tract of boys being smaller than that of girls or the difference in the immune system of boys and girls.3

According to Christian & Ari, age is a risk factor for death in toddlers suffering from pneumonia. The risk of developing pneumonia is greater in toddlers aged <2 years compared to toddlers aged >2 years. This is because the age of <2 years is a vulnerable period for toddlers to contract pneumonia because the toddler's immune system is still low and the respiratory system is not yet functioning perfectly. 3 Generally, toddlers under 24 months of age are more susceptible to pneumonia than toddlers under 24 months of age. over 24 months. Toddlers under 24 months of age are susceptible to pneumonia because toddlers at that age have low immune system.

The higher the age of the toddler, the better the toddler's body's defenses against disease, due to the development of body cells and defenses obtained through vaccines. 5 Apart from low body immunity, toddlers under 24 months of age are susceptible to pneumonia because they have incomplete airways. perfect and the airway lumen is still narrow. 4 The age group of children under 5 years have a lower level of immunity compared to adults. A cellular immune system that is not yet optimal and the limited humoral immune response in increasing the rate of ertussis results in toddlers being vulnerable and easily suffering from infectious diseases. This is due to narrow ertussi respiratory tracts and imperfect immunity, toddlers have lower defense mechanisms than adults.

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The quantity and quality of food consumed by children has an influence on the nutritional status of toddlers. Quantity shows the amount of nutrients consumed for the body's needs according to the child's age. Children under 1 year old are recommended to eat 2 – 3 times a day and children over 1 year old are recommended to eat 3 times a day. 8 Good quality food is food that contains all the nutrients needed by children in order to grow and develop well. good, such as carbohydrates, vitamins, fats, minerals, protein and water. Providing nutrition that is appropriate to the growth and development needs of toddlers can increase their immune system. In toddlers with good nutrition, it is hoped that the degree of pneumonia will be milder so that they do not require a long treatment time. 9

Exclusive breastfeeding is breastfeeding without any other food or drink including water except for medicines, vitamins and minerals and expressed breast milk. Breast milk is known to provide great protection for toddlers because it plays a very important role in increasing the baby's immunity. The number of toddlers who receive sufficient breast milk intake is greater than those who do not. 31 The factor of exclusive breastfeeding is closely related to nutritional status factors. Exclusive breastfeeding for 6 months is good for improving nutritional status, so that the risk of pneumonia in toddlers can be reduced.

Immunization has an important role in preventing child deaths due to pneumonia through two mechanisms, namely vaccination as a direct step in preventing infectious diseases, and vaccination as an effort to prevent infectious complications that may occur. Pneumonia is a complication of ertussis and measles, so providing basic immunization is useful as a prevention of complications from these diseases. Streptococcus pneumoniae is the most common cause of severe pneumonia in children throughout the world, and is the most common cause of death due to pneumonia. PCV) Immunization that can directly prevent pneumonia is the Pneumococcal Conjugate Vaccine (PCV). Giving the PCV vaccine can prevent bacterial pneumonia and reduce cases of hospitalization due to pneumonia. Providing this immunization is not yet a government program because it is included in the selected basic immunization group, so not all children in Indonesia receive this immunization.

WHO reports that 45% of deaths due to pneumonia in children under five years of age are caused by household air pollution, including environmental factors, for example air pollution from cigarette smoke and dense housing so that air circulation is not optimal. Anwar and Ika (2014), added that the function of air flow not flowing smoothly in the room will make it easier for indoor contaminants to last longer in the room and result in higher exposure to indoor pollutants for individuals who are indoors, especially toddlers who are still vulnerable to bad exposure to their respiratory tract. Efforts that can be taken to reduce the number of incidents, namely avoiding smoking in the house and stopping traditional practices which can be a source of air pollution in the house and cause children to be exposed to respiratory problems. Avoid smoking inside the house.

CONCLUSION

Male gender, age 13-24 months, good nutritional status, history of exclusive breastfeeding, complete basic immunization, no air pollution, constitute the highest proportion of risk

factors for pneumonia in toddlers at Ibnu Sina Hospital, Makassar City in 2022.

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