http://ejournal.seaninstitute.or.id/index.php/healt
Jurnal Eduhealt, Volume 13, No. 01 September 2022
E-ISSN. 2808-4608

CHARACTERISTIC OF SUDDENT INFANT DEATH SYNDROME (SIDS) KNOWLEDGE OF GENERAL PRACTITIONER IN BANDUNG CITY AT 2020

Andri Andrian R[1] , Elly Noer Rochmah[2],Dafha Braza Musti[3]
[1]Bagian Forensik Fakultas Kedokteran Universitas Jenderal Achmad Yani, Cimahi
[2]Bagian Anak Fakultas Kedokteran Universitas Jenderal Achmad Yani, Cimahi
[3]Program Studi Kedokteran Umum, Fakultas Kedokteran Umum Universitas Jenderal Achmad Yani, Cimahi

ARTICLE INFO

Keywords:
General practitioners, level of knowledge, SIDS, risk factors.

Email :
andri.andrian@lecture.unjani.ac.id

ABSTRACT

Sudden Infant Death Syndrome (SIDS) is the death of an infant without known cause after comprehensive examination including scene investigation, autopsy, and history of the previous disease. Knowledge is the result of know something after sense a certain object. The incidence of SIDS in 2007 was 2.5% of the total neonatal mortality rate in Indonesia. This study's purpose is to understand the level of SIDS knowledge of general practitioners and risk factors for SIDS known by general practitioners. This is a descriptive survey study with a total of 58 general practitioners who provide health services as respondents. The sample is chosen by purposive sampling technique. The majority of respondents are women with an average age range from 26-35 years old. Sixty-nine percent respondent has a good level of SIDS knowledge and sixty-seven point two respondent notes preterm born as a possible risk factor for SIDS. This level of knowledge on SIDS may be caused by low detected cases of SIDS in Indonesia. From this result, we suggest holding more symposiums about SIDS that aim to increase general practitioner ability to diagnose SIDS.

1. INTRODUCTION

Sudden Infant Death Syndrome (SIDS) is one of the categories of Sudden Death Unexpected in Infancy (SUDI) which is a condition where infant mortality cannot be predicted, either with or without a definite explanation.[1] There were 1,400 deaths due to SIDS with 33.4 cases per 100,000 births during 2017 in the United States.[1]France reported an incidence of SUDI of 0.40 cases per 1000 births of which half were SIDS.[2]SIDS is the leading cause of death in children aged 1 month to 1 year in developing countries and accounts for 40-50% of deaths in this age group with a peak incidence at 2 – 3 months of age.[3]In 2007 the neonatal mortality rate in Indonesia reached 45% with a SIDS incidence rate of 2.5%.[4]

SIDShave similar clinical signs in each casei.e. the baby was put to sleep at night and then found dead when the parents visited him in the morning.[5] SIDS itself is very difficult to detect signs and symptoms. However, there are several risk factors that can be used to identify the incidence of SIDS including developmental period, age, gender, twins, premature babies, parents who smoked or used narcotics before giving birth, sleeping position, bed sharing, bed surface, incidence seasonality, and social class.6-8 Age under six months is a risk factor for SIDS and is an age period that requires certain types of vaccinations in children. This caused unrest in the community due to the circulation of information linking the incidence of SIDS with vaccination despite the fact that various studies did not find a relationship between the two things. 9, 10 It is therefore important for a general practitioner to know the risks apart from diagnosing SIDS.11 Proof of the cause of death in SIDS is through autopsy. The results of autopsy examinations for SIDS cases usually show that there is no disease that causes death or signs of serious illness and the last condition of the baby is generally healthy before death.12 Cases of sudden death in infantsshould be determined by clinical autopsy. However, not many clinical

autopsies are performed in Indonesia, so the determination of SIDS is usually through a forensic autopsy. Enforcement of the SIDS diagnosis with a forensic autopsy is actually difficult because there are medico-legal aspects that require an investigator's request as a condition for the autopsy process to be legally allowed.[13,14,15]

Research related to SIDS in Indonesia, especially in the city of Bandung, has not been widely carried out. This together with the various backgrounds described above then became the reason for the author to conduct research on the level of knowledge of general practitioners towards SIDS in the city of Bandung.

2. METHOD

This research is a descriptive study with a cross sectional design involving general practitioners in the city of Bandung as respondents. The inclusion criteria in this study were doctors who provided health care practices in the clinic and were willing to participate in this study as evidenced by signing an informed consent and filling out questionnaires. Based on the calculations, the required minimum sample size is 56 people. Data collection is done bypurposive sampling from several private clinics in the city of Bandung under the West Java clinical association. The data collection process is carried out with due observance of the COVID-19 health protocol as recommended by the government. The collected data was then analyzed using the SPSS program.

3. RESULTS AND DISCUSSION

This research was conducted in 14 private clinics under the West Java clinical association in Bandung City and obtained as many as 58 respondents who work as general practitioners who provide health care practices.

The basic characteristics of the study in the form of gender and age distribution of respondents are shown in Table 4.1 and Table 4.2 as follows:

Table 4.1Gender Characteristics of Respondents

Gender	F(n)	P(%)
Man	20	34.5
Woman	38	65.5
Amount	58	100

Table 4.2Characteristics of Respondent Age

Age	F(n)	P(%)
25 years	4	6.9
26-35 years old	36	62.1
36-45 years old	9	15.5
46-55 years old	4	6.9
56-65 years old	3	5.2
>65 years old	2	3.4
Amount	58	100

The results of this study indicate that the largest proportion of respondents is female (65.5%) in the age group between 26-35 years (62.1%).The gender characteristics of general practitioners who work

in private clinics in Bandung are in accordance with the statement of the Ministry of Health in 2019 which showed that the majority of general practitioners in West Java were female.16 According to the Ministry of Health of the Republic of Indonesia (2009), age is divided into 9 groups from infancy (0-5 years) to the elderly (65 years and over). This study found variations in the age of respondents who work as general practitioners starting from the late teens (25 years) to the elderly (65 years and over) with the majority of general practitioners being in the early adult group (26-35 years) as much as 62.1% .17

The results of the questionnaire data processing get an overview of the general practitioner's knowledge about Sudden Infant Death Syndrome (SIDS) which is divided into three levels of knowledge, namely good, sufficient and less as shown in table 4.3.

Table 4.3General Physician Knowledge Level Category on SIDS

Knowledge level	F(n)	P(%)
Good (>75%)	40	69.0
Enough (56%-75%)	18	31.0
Less (<56%)	0	0.0
Amount	58	100

Table 4.3 which is a categorization of the level of knowledge of general practitioners based on the total percentage of the 17 research questionnaire statement items.From 58 respondents, 40 respondents (69%) had a good level of knowledge, 18 respondents (31%) had a sufficient level of knowledge and none had poor knowledge about SIDS. This is in accordance with the theory found by Isezuo, et al. (2018) in Nigeria that general practitioners have a good level of knowledge about SIDS.18

The results of the questionnaire answers showed that 43.1% of respondents answered incorrectly because they did not know that gender and also a soft bed surface were risk factors for SIDS. This is because according to respondents, the sex of the baby does not affect lung function in newborns, so it is not a risk factor that can cause SIDS. The baby's sex factor in SIDS is still not known with certainty, but the incidence of SIDS in male infants has a higher risk than female infants.6

The factor of a soft bed surface on a baby's bed is also denied as a risk of SIDS because according to respondents, babies do need a warm bed atmosphere and soft sheets can cause an increase in temperature so that babies feel comfortable. Moon and Hauck (2018) said that a soft bed surface can increase the risk of asphyxia and also an increase in temperature in infants which can cause SIDS in infants.19

The results of the questionnaire data processing show a general practitioner's description of the risk factors that can cause SIDS as shown in Table 4.4. following:

Table 4.4Overview of Listed SIDS Risk Factors

		Answer		No answer		Amount	
No.	Risk Factor	F(n)	P(%)	F(n)	P(%)	F(n)	P(%)
1	Gender	14	24.1	44	75.9	58	100
2	Age	21	36.2	37	63.8	58	100
3	Premature baby	39	67.2	37	63.8	58	100
4	Twin birth	1	1.7	57	98.3	58	100
5	History of exposure to smoking, drugs and alcohol consumption during pregnancy	33	56.9	25	43.1	58	100
6	Sleeping position	28	48.3	30	51.7	58	100

7	bed sharing	8	13.8	50	86.2	58	100
8	Soft bed surface	9	15.5	49	84.5	58	100
9	Seasonal incidence	0	0	58	100	58	100
10	Social class	2	3.4	56	96.6	58	100

As many as 67.2% of respondents answered correctly about premature babies as one of the risk factors for SIDS, because premature babies themselves are related to the level of lung maturity in infants who are not perfect due to lack of surfactant, so that there will be an increase in respiratory effort in infants which causes babies not to breathe. will breathe perfectly. The results of this study are in accordance with the theory put forward by Mitchell et al in Canada in 2020 which states that premature babies have a greater risk of SIDS than babies born at term as much as 4 times greater than babies born at term and have a birth weight enough.19,,20,21,22,23

The second and third most common answers were exposure to cigarette smoke, consumption of drugs and alcohol-containing beverages in parents during pregnancy where 56.9% of respondents answered correctly as well as answers to sleeping position as many as 48.3% of respondents gave appropriate answers. The risk of SIDS will increase if a pregnant mother has a habit of smoking or consuming alcohol and drugs in the first trimester of pregnancy, the risk will increase by eight times. According to IDAI as many as 40 percent of babies in the world have been passive smokers since birth, so babies can be exposed to harmful fumes that can interfere with their respiratory tract and are prone to death, because as many as 165,000 children in the world die every year due to lung disease related to exposure to cigarette smoke.24

Sleep position is the biggest risk factor that can be modified by parents. According to Moon (2018) the incidence of SIDS will increase by 1.7-12.9% if the baby is put to sleep on his stomach or side because sleeping on his stomach can cause upper airway obstruction which allows the baby to breathe back the air that has been exhaled during sleep.[19,25,26,27,28,29]

The risk factors for SIDS that respondents rarely know about based on the questionnaire are social class (3.2%), multiple births (1.7%), seasonal incidence (0%). The risk factor for multiple births is considered not a risk factor because there are no problems that can cause pulmonary function disorders in infants from a history of childbirth and multiple pregnancies. According to Moon (2016) babies with a history of multiple births have risk factors at least 2 times greater than single babies, this is because in general, multiple births have physical deficiencies.[6,30]

The risk factor for seasonal incidence, which is one of the risk factors for the occurrence of SIDS, does not seem to affect it because Indonesia is a country that only has 2 cycles of seasons, namely summer and rainy season, which are different from cycles on other continents, so many respondents do not know SIDS risk factors. Meanwhile, the incidence of SIDS in other countries that have 4 cycles of seasons will increase between October and April which is winter. According to Sauko in Knight's Forensic Pathology, the incidence of SIDS in the tropics does not have a clear pattern, because the tropics have a high infant mortality rate and have a lower statistical accuracy record.

Social class is not considered a risk factor because those with low economic status are associated with diseases related to nutritional adequacy and have no relationship with risk factors for SIDS. This is in accordance with research conducted by Azahari (2020) which reports that low socioeconomic groups greatly affect nutritional status in the family and become a major issue in the world, especially the occurrence of chronic malnutrition in pregnant women. According to Wood, et al. (2012), low socioeconomic groups greatly affect the risk of SIDS, although it is difficult to link epidemiological factors with the incidence of SIDS.6,31,32

The limitations of this study are the low accurate data regarding the incidence of SIDS in Indonesia and the difficulty in conducting research during the COVID-19 pandemic. The pandemic situation does not allow face-to-face data collection so it must be done online using the google form application for filling out questionnaires & whatsapp as a medium of communication with respondents. This resulted in a longer research time due to difficulties in contacting respondents who were busy with various health service activities.

4. CONCLUSION

Based on the results of this study, it can be concluded that more than half of general practitioners have a good level of knowledge about SIDS. Risk factors for SIDS that are well known by general practitioners include premature infants, history of exposure to smoking, drugs and alcohol consumption during pregnancy, sleeping position, and age. Meanwhile, gender, soft bed surface, bed sharing, social class, multiple births, and seasonal incidence are risk factors for SIDS that are less familiar to general practitioners. Considering that there are still some risk factors for SIDS that are not yet known by general practitioners, the authors suggest the need for more seminars on SIDS to increase understanding and clinical skills that can support the diagnosis of SIDS.

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