Evaluation of students’ knowledge about the risk factors and prevention of the Sudden Infant Death Syndrome

Ocena wiedzy studentów na temat profilaktyki i czynników ryzyka Zespołu Nagłej Śmierci Niemowlęcia

Ilona Kopyta, Ewa Emich-Widera, Anna Banak, Ewelina Kwiecień, Justyna Piszko, Ewa Zwonik, Małgorzata Pamuła, Przemysław Roman, Monika Kałużna, Elżbieta Marszał, Stanisław Dyczkowski

Department of Neuropediatrics, Medical University of Silesia, Katowice

ABSTRACT

Occurrence and the risk factors of the Sudden Infant Death Syndrome (SIDS) pose a serious medical problem. SIDS incidence can be prevented by taking appropriate precautions and avoiding risk factors. Aim: The purpose of the research was to assess students’ knowledge about the risk factors and prevention of the Sudden Infant Death Syndrome. Material and method: The study was carried out among the students of Medical University of Silesia and non-medical universities. The examined population contained 190 women and 79 men at the age between 19 and 25. Custom made questionnaire composed of 20 questions was used and the results were statistically analyzed. Results of the study: Most of the responders (76%) have heard about the SIDS but their knowledge is not sufficient. Main source of heir knowledge was school, TV, friends and the Internet. The best known risk factor of SIDS was an infant exposure to cigarette smoke. Generally, the students would like to extend their knowledge about the risk factors of Sudden Death Syndrome and prevention programs. Conclusions: As the educational program is not sufficient, the students’ knowledge in this field is not sufficient as well, even at the higher stage of their education.

Key words: Sudden Infant Death Syndrome, SIDS, knowledge, students, non-medical, medical

STRESZCZENIE

Występowanie i czynniki ryzyka Zespołu Nagłej Śmierci Niemowlęcia (SIDS) są poważnym problemem medycznym. Można im zapobiegać poprzez odpowiednią profilaktykę i unikanie czynników ryzyka. Cel pracy: Celem pracy była ocena wiedzy studentów uczelni medycznej oraz wyższych uczelni niemedycznych w zakresie profilaktyki i czynników ryzyka SIDS. Material i metodyka: Stworzono autorski kwestionariusz zawierający 20 pytań. Grupę badawczą stanowiło 190 kobiet i 79 mężczyzn w wieku od 19 do 25 lat – studentów Śląskiego Uniwersytetu Medycznego i śląskich wyższych uczelni niemedycznych. Wyniki badania zostały opracowane statystycznie. Wyniki: Większość respondentów (ok. 76%) spotkała się z pojęciem SIDS, jednak ich wiedza jest niewystarczająca. Wiedza większości badanych pochodziła ze szkoły/uczelnii, TV, od znajomych i z Internetu. Najlepiej identyfikowanym czynnikiem ryzyka była ekspozycja dziecka na dym tytoniowy. Większość (ok. 87%) studentów wykazała chęć pogłębienia swojej wiedzy w zakresie profilaktyki i czynników ryzyka SIDS. Wnioski: Dodpo program nauczania nie zostanie poszerzony o wiadomości z zakresu profilaktyki i czynników ryzyka SIDS, wiedza studentów, zwłaszcza uczelni niemedycznych, będzie niewystarczająca.

Słowa kluczowe: zespół nagłej śmierci niemowlęcia, SIDS, wiedza, studenci

Sudden infant death syndrome (SIDS) is defined as the sudden death of an infant that is unexpected by history and unexplained by a thorough postmortem examination, which includes a complete autopsy, investigation of the scene of death, and review of the medical history [1]. Infants are at greatest risk of SIDS at 2–4 months of age, with most SIDS-related deaths having occurred by 6 months. SIDS continues to be the third cause of postneonatal infant death, after congenital malformations, deformations and chromosomal abnormalities and disorders relating to short gestation and low birthweight, not elsewhere classified. It accounts for 8 percent of infant deaths. The rate of SIDS in 2004 in USA was 0.55 /1000 live births [4]. Unfortunately there are no such statistics in Poland, neither knowledge on this topic was surveyed to date. There are no routine autopsy findings characteristic for SIDS or no findings required for its diagnosis. However, there are some common observations like petechial hemorrhages (68–95% of SIDS cases), pulmonary congestion (89% of cases) and pulmonary edema (63% of cases). The specific mechanisms for SIDS are not known, although the specific risk factors have been identified in epidemiological studies. They can be divided into two categories the maternal and infant risk factors (including parental care). Maternal
risk factors include smoking, alcohol (especially preconceptionally and in first trimester), illegal drug use, low age and level of education, increased parity and short interval between pregnancies. Infant risk factors are age, male sex, prematurity, no pacifier used at bed time, prone or side sleeping position, recent febrile illness, soft sleeping surface, thermal stress/overheating, face covered by bedding, sharing bed with parents or siblings and sleeping in own room rather than in parents’ room [2].

AIM

The purpose of authors’ research was to assess the students’ knowledge about the risk factors and prevention of the sudden infant death syndrome. We did not find any Polish or foreign publication, which would evaluate young people’s knowledge about SIDS. That is why we decided to evaluate Polish students’ knowledge about risk factors and prevention of SIDS. The group of responders was chosen because they are potential parents. They are also a representation of future Polish higher social class.

We wanted to compare medical and non-medical students’ knowledge, and also knowledge of women and men.

MATERIALS AND METHODS

The study was carried out among the students of Medical University of Silesia and non-medical universities: University of Economics in Katowice, Academy of Music in Katowice and Academy of Physical Education in Katowice. The examined population contained 269 students: 190 women and 79 men at the age between 19 and 25. 194 of responders were students of medical university, 75 were students of non-medical universities.

To examine students’ knowledge about SIDS risk factors and prevention, we used the questionnaire composed of 20 questions. In the beginning of the questionnaire we placed a short information about SIDS, to make it more clear for investigated group. We also explained how to fill it in correctly and we informed the responders about the aim of our research. The questionnaire was anonymous and the only personality data we asked for was responders’ sex, age (younger or older than 23) and kind of university (medical or non-medical).

In the first question students were asked to declare if they have ever heard about SIDS. The rest of questions were divided into two groups. First we asked about factors connected with infant: gender and age, prematurity and multiple gestation and its influence on likelihood of SIDS incidence. The second group of questions concerned infant care and SIDS prevention. We also asked about information like: the safest position for an infant while sleeping, clothing infant warmly to sleep, putting in infant’s bed plush toys, pillows and blankets, using a pacifier while sleeping, the right parental proximity to an infant during sleep, breast feeding. The second group of questions was connected with mother and social aspects. We wanted to investigate students’ knowledge about such risk factors as: mother’s age, education and social condition, prenatal smoking and drinking alcohol by pregnant woman and infant exposure to cigarette smoke. Our questionnaire also contained the environmental questions about the influence of season and infections of upper airways. In the end of the questionnaire we asked students about main sources of their knowledge, about risk factors and prevention of SIDS. We also asked if they would like to extend their knowledge about SIDS.

The results were statistically analyzed using Fisher’s exact test and Chi² test. We estimated general students’ knowledge of each risk factor. We compared knowledge about SIDS risk factors and prevention of medical and non-medical students. We also compared knowledge of groups of medical and non-medical women and men.

RESULTS

Generally results of the poll showed a significant difference of knowledge about SIDS between as well medical and non-medical students and female and male students. Most of the interrogated declare that they’ve heard of SIDS, only 24% haven’t. School (31%) and medias (TV, radio) (26%) were main sources of knowledge. Other sources of information were: colleagues (23%), books (14%), internet (14%), general practitioner (13%), periodicals (12%) and parents (7%) and others (14%). Our pool shows a significant difference between sources of knowledge among medical and non-medical students. Sources pointed out by medical students seem to be more reliable: 40% of students chose university and 17% got their knowledge from books. While non-medical students got their knowledge about SIDS mostly from friends (31%) and medias (21%).

We evaluated general knowledge of SIDS prevention and risk factors, taking 66–79% correct answers as a “good” level, 51–65% as “sufficient” level and less than 51% as “insufficient” level. To achieve “very good” level respondents should point out at least 80% correct answers but there was no one from the whole group with such a result. Only 18% of respondents achieved good level, 34% achieved “sufficient” and 48% “insufficient”.

General results show that knowledge about prevention and risk factors of SIDS is not sufficient, especially in a group of non-medical students. 73% of their results were insufficient, while medical students answered insufficiently in 38%. Medical students answered well in 24%, while non-medical students only in 1%. The best answers were given by female medical students – 28% of them showed good knowledge of the subject, whereas non-medical female students knowledge occurred to be very poor – 76% insufficient results and 0% good. Surprising was that male medical students’ knowledge was also poor only 15% had good results.

Research showed that among female students there were more “good” results (20.5%). Only 11.4% of male students’ answers were classified as “good” result. Our research showed that the best known risk factors among students were prenatal smoking and drinking (79%), infant exposure to cigarette smoke (75%), putting in infant’s bed
plush toys, pillows and blanket (74%) and parental proximity to an infant during sleep (71%). The less known factor was the use of pacifier by a sleeping child (17%). The most meaningful factors are those connected with parental care, because the proper care can prevent SIDS occurrence. Alarming is that less than a half of students knew about the safest position of an infant while sleeping. Especially worrisome is the fact that women from non-medical universities, who may be future mothers, know so little about proper infant care, which prevents SIDS. Only 28% of them knew that the supine position is the safest one for an infant, half of them knew about the risk of overheating the child and 64% knew that putting plush toys, pillows and blankets in infant’s bed could be dangerous. Comparing to medical female students it is a poor result. Interesting is that there is no such difference between medical and non-medical male students’ results. The only statistically significant difference is in the question concerning putting on infant multiple layers of clothing or blankets to sleep (overheating the child). Medical students’ answers to this question were better ($p=0.01$).

**DISCUSSION**

Our research is the first attempt of evaluation students’ knowledge of SIDS so we cannot compare its results to any other Polish or foreign studies. Risk factors analyzed in our research are well known and described in medical reports. The most popular mentioned factors are: sleeping position, prematurity, male gender, low birth weight, prenatal smoking and drinking alcohol by a pregnant women and infant exposure to cigarette smoke [8,10,11].

There are many reliable sources of information concerning SIDS on foreign websites and in wide-spread, easily reachable popular publications. Western countries also introduced nationwide campaigns about SIDS and proper parental care of an infant (for example American SIDS “Back to Sleep” Campaign by National Institute of Child Health and Human Development). Still no one tried to evaluate in a way as we did, whether the knowledge among young people-potential parents, after such efforts is sufficient. Polish attitude to the problem of SIDS occurrence seems to be poorer in comparison to western countries. Our research showed that in Poland there is a great necessity to organize social campaigns similar to those in western countries.

According to our study the best known risk factors were connected with negative influence of cigarette smoke. We can presume that it is the effect of many global and local anti-smoking campaigns, which are so popular nowadays. Except influence of cigarette smoke students showed rather unsatisfying knowledge about risk factors especially those including basic care of an infant which can prevent SIDS (sleeping position, use of pacifier, breast feeding, hardness of mattress in infant’s bed, overheating the child).

**CONCLUSIONS**

Presented study is the first evaluation of students’ knowledge about risk factors and prevention of SIDS. We hope that our research will take notice of the necessity for improving young people’s knowledge, as they may become parents soon. After analyzing results of our study we came to conclusion that students’ knowledge about the problem of SIDS is insufficient. Nevertheless medical students’ knowledge occurred to be wider. That proves that information got from university and competent publications is useful in such important social aspects as SIDS. Still education in practical parental care should be continued and intensified among medical students. Our research showed that their knowledge is not satisfying, especially in a group of male students.

The study showed that non-medical universities do not provide appropriate practical knowledge about prevention and proper care of an infant. It proves the importance of social educational programs, which should be useful, attractive and understandable for people not connected with medicine (without basic medical knowledge). Such a campaigns in western countries gave amazing results-decrease of SIDS-related infant mortality up to 50-90% [8]. Encouraging is the fact that major of students declared the willingness of extending their knowledge of prevention and risk factors of SIDS.

**REFERENCES**


Correspondence address:
Ilona Kopyta, PhD, Department of Neurpediatrics, Medical University of Silesia, Katowice, Poland, e-mail:ilonakopyta@autograf.pl