

Knowledge, Attitude and Practice on Pulmonary Embolism in Pregnancy among Women in Bandar Indera Mahkota, Kuantan, Pahang

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ABSTRACT: Pulmonary embolism is a condition by which a blood clot blocks an artery or its branches in the lung. In Malaysia, pulmonary embolism serves as the top contributors to maternal death, suggesting that the knowledge, attitude and practice on pulmonary embolism among mothers in Malaysia are still uncertain. This study aimed to identify the level of knowledge, attitude and practice of mothers regarding pulmonary embolism in pregnancy. A cross-sectional study was conducted with a structured questionnaires involved 93 subjects. Most of the women had high level of knowledge (n=55, 59.1%), attitude (n=85, 91.4%) and practice (n=78, 83.9%). Among the significant socio-demographic factors are: (1) age and educational background have significant association with knowledge (p=0.037; and p=0.004); (2) educational level, educational background and monthly household income have significant association with attitude (p=0.016; p=0.000; and p= 0.000) and practice (p=0.033; p= 0.000; and p= 0.010) respectively. Besides, significant correlation are identified between knowledge-attitude (rs=+0.307, p=0.003), knowledge-practice (rs =+0.423, p=0.000) and attitude-practice (rs =+0.683, p=0.000). As a conclusion, majority of the participant had high level of knowledge, attitude and practice toward pulmonary embolism in pregnancy.

Keywords: *maternal death, Malaysia, pregnancy complication*

1. INTRODUCTION

Pulmonary embolism is a condition by which a blood clot blocks an artery or its branches in the lung. This disease is recognized as one of the most feared complication and attributable to maternal death either during pregnancy or even during confinement period which is about six weeks after delivery. Although this circumstance is rare, but it can cause sudden death of the casualty. In most cases, this incident can only be confirmed by forensics throughout post-mortem autopsy. [1].

Pregnant women have a high tendency to develop blood clot five times compared to normal person. Pregnancy state can be characterized through Virchow's triad consisting of three factors that are causally related to thrombus formation which are blood hypercoagulability, reduced stasis of blood flow and

endothelial injury and dysfunction [2]. In addition, the likelihood of developing this disease is greatly affected by a variety of factors. Despite of having the history of embolism in pregnancy, maternal aged more than 35 years old, obesity, higher rate of caesarean deliveries, higher rate of major multiple pregnancies, a low rate for thromboprophylaxis, hemorrhage, pre-eclampsia are also becoming one of the associated factors [3].

Since the trend of maternal death due to pulmonary embolism is reported high, the evaluation on knowledge, attitude and practice (KAP) regarding this issue should be explored. To date, there is still lack of adequate data study for pulmonary embolism in pregnancy in Malaysia. Hence, this study is designed to obtain information regarding KAP of pulmonary embolism in pregnancy among women in the targeted area. The results from this study are highly anticipated to be beneficial to identify the status of women's knowledge so further steps on prevention and management of pulmonary embolism during pregnancy can be proposed.

2. METHODOLOGY

This is a cross-sectional study which involved 93 women in Kuantan, Pahang. The responses were selected among those who have experienced pregnancy, child delivery or miscarriage at least once using a self-administered questionnaires. The questionnaires comprised the following parts: Part A: Socio-demographic data and pregnancy characteristics. Part B: Questions related to knowledge regarding pulmonary embolism. Part C: Women's attitude related to pulmonary embolism. Part D: Women's practices toward pulmonary embolism. The response was analyzed using Statistical Package for Social Science (SPSS) window version 12.0 with 95% of confidence interval. Descriptive frequency table was used to describe the level of knowledge, attitude and practice regarding pulmonary embolism in pregnancy. On the other hand, one-way analysis of variance (ANOVA) was used to determine the association of socio-demographic data with the knowledge, attitude and practice level. Meanwhile, Spearman's correlation and Pearson correlation test were used to study the association between the elements of knowledge, attitude and practice regarding pulmonary embolism in pregnancy.

3. RESULTS AND DISCUSSION

3.1 Socio-demographic characteristic

The mean age of respondents was 35 and more than half of the respondents (63.4%) undergo a secondary level of education whom had certificate/diploma/degree followed by tertiary educational level (Master/PhD) with n= 18 (19.4%) and primary educational level (school stage), n=14 (15.1%). Majority of the respondents in this study had science-based educational background, with 48 respondents (51.4%). However, the number is slightly higher by 3 from the number of respondents with non-science based educational background, n=45 (48.4%).

3.2 Level of Knowledge, Attitude and Practice

In terms of knowledge, it was recorded that the majority of respondents had a high level of knowledge on PE associated with pregnancy with 55 respondents (59.1%), followed by moderate level which was n=38 (40.9%) and none of low level of knowledge were recorded. For attitude and practice scores, most of the respondents constituted an excellent level of attitude and practice, which were 85 respondents (91.4%) and 78 respondents (83.9%) respectively.

It can be observed that the healthcare providers and mass media serve as the main sources of information regarding pulmonary embolism in pregnancy. This is because both of these media are easily accessible and reachable among most of the pregnant women nowadays. Previous study also reported that internet was a well-known tool to gain information regarding health information [4].

3.3 Association of socio-demographic factors with knowledge, attitude and practice

The results suggested that age was significantly associated with women's level of knowledge on PE in pregnancy. The study demonstrated that women in the age group between 18 to 35 years old were more likely to be knowledgeable on obstetric embolism in relation with women who were 35 years old and above. Association of knowledge with age had also been reported in studies from Nigeria [2]. Increased knowledge of danger signs in pregnancy among older mothers may be related to their own prior experiences of pregnancy and labour, which serve as an important source of information, particularly to those who have had experience of obstetric complications during previous pregnancies [3]. Therefore, young mothers may need more attention and consideration from nurses during antenatal health education gatherings to enhance their knowledge and understanding on post-delivery care especially those with lack childbirth experiences.

Educational background has a significant relationship with knowledge in this study. Respondents who hold science's background education were more likely to have better knowledge on PE compared to respondents with

non-science's background. The reason behind this finding could be explained by the fact that women with science-based education may have less difficulty processing and understanding the information received during antenatal care visits, especially on PE which was significantly lies under science field .Moreover, educational background also have significantly associated with optimistic attitude and practice towards management of PE as proven by a study done previously by Teng et al., [1] in Malaysia. Most of them which are from sciences background understand and acknowledged the important insight into the improvement of mothers's health.

4. CONCLUSIONS

From this study, it is suggested that the empowerment of knowledge on obstetric embolism during pregnancy, childbirth, and postpartum period is necessary for safe motherhood. However, despite of this finding there is still high prevalence of maternal death due to this disease in Malaysia suggesting that future research should be carried out in a larger setting. To make the findings more reliable, future studies ought to emphasize on the rural area compared to urban area for better outcome. Thus, further comprehensive research should be done for the assessment on knowledge, attitude and practice towards direct obstetric causes of maternal mortality in different settings.

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REFERENCES

- [1] Teng S, Zuo T, Jummaat F, Keng. Knowledge of pregnancy danger signs and associated factors among Malaysian mothers. *British Journal of Midwifery*, 2015, 23(11): pp.800-806
- [2] Ekabua JE, Ekabua KJ, Odusolu P, Agan TU, Iklaki CU, Etokidem AJ. Awareness of Birth Preparedness and Complication Readiness in Southeastern Nigeria. *ISRN Obstetrics and Gynecology*, 2011; 1-6.
- [3] Devis P, Knuttinen MG. Deep venous thrombosis in pregnancy: Incidence, pathogenesis and endovascular management. *Cardiovascular Diagnosis and Therapy*, 7(S3), 2017.
- [4] [Agunwa CC, Nnebue CC, Duru CB, Aniebue PN, Uzochukwu UA, Ifeadike CO. Knowledge of Obstetric Danger Signs Among Women of Reproductive Age in Rural Communities in Enugu State, Nigeria. *American Journal of Health Research*, 2015; 3(6): 376