PDF version

Short research communication

Idayu Idris,[1] Manal Sheryan,[1,2] Qistina Ghazali[1] and Azmawati Nawi[1]

[1]Department of Community Health, Faculty of Medicine, UKM Medical Centre, Cheras, Kuala Lumpur, Malaysia (Correspondence to: A. Nawi: azmawati@ppukm.ukm.edu.my). [2]Al Thawra Hospital, Sana'a, Yemen.

Abstract

Background: Low birth weight can lead to infant death, especially during the first year of life.

Aims: To assess risk factors related to low birth weight babies in Sana'a, Yemen.

Methods: We conducted an unmatched case–control study of 252 women who came for delivery at Al Thawra Hospital, Sana'a, Yemen, between August and October 2016.

Results: Significant risk factors for low birth weight were: birth interval

Conclusion: Shorter birth interval is an important risk factor for low birth weight; therefore, improving maternal awareness of this should be emphasized during postnatal follow-up.

Keywords: low birth weight, prematurity, pre-eclampsia, khat chewing, smoking.

Citation: Idris I; Sheryan M; Ghazali Q; Nawi A. Reproductive and behavioural risk factors of low

birth weight among newborns in Al Thawra Hospital, Sana'a, Yemen. East Mediterr Health J. 2020;26(11):1415-1419. https://doi.org/10.26719/emhj.20.061

Received: 14/05/19; accepted: 27/11/19

Copyright © World Health Organization (WHO) 2020. Open Access. Some rights reserved. This work is available under the CC BY-NC-SA 3.0 IGO license (https://creativecommons.org/licenses/by-nc-sa/3.0/igo).

Introduction

Low birth weight (LBW) is defined as birth weight

There is a high prevalence of LBW infants in Yemen, where 32% of all newborn infants have LBW (6). This study was conducted to assess the maternal sociodemographic, reproductive and lifestyle risk factors related to LBW in Sana'a City, Yemen.

Methods

Study design and sampling

This was an unmatched case–control study conducted at Al Thawra Modern General Hospital, located in Sana'a City, Yemen during August–October 2016. This hospital is one of the biggest referral hospitals in Yemen. The cases and controls were selected according to the inclusion criteria, that is, women who gave birth to a single live infant and who were resident in Sana'a City for at least 1 year. Women who had given birth to newborns weighing **Data collection**

Data were collected from selected women through self-administered questionnaires and medical records. Questionnaires were administered via face-to-face interview and questions were closed-ended in nature (Yes/No answers). The questionnaires and medical records consisted of women's age, educational level, occupational status, birth parity, birth interval, history of previous abortion, history of pre-eclampsia during the current pregnancy, gestational age of the newborn, number of antenatal care visits, as well as khat chewing and smoking during the current pregnancy. Interviews were conducted by 2 well-trained female data collectors within the first 24 hours after delivery, and medical record data were extracted after the interview. The researchers trained the data collectors and supervised them during data collection and checked all the questionnaires to ensure accuracy.

Ethical considerations

The study was approved by the Medical Research and Ethics Committee of the University of Science and Technology, Sana'a, Yemen. Before starting the interview, the participants were informed about the purpose of the study and its benefits. Verbal and signed consent were obtained from the participants before data collection. The respondents were assured that all the information would be confidential and only used for this study.

Statistical analysis

All the data were analysed by SPSS version 24.0. Qualitative variables were described by calculation of frequency, and quantitative variables were represented by mean and standard deviation. Odds ratios (ORs) and 95% confidence intervals (CIs) were calculated to measure the risk. $\chi 2$ and Fisher's exact tests were used to show significant associations between cases and controls, as well as association of various risk factors and LBW. We used multiple logistic regression to calculate the adjusted ORs (aORs) after controlling for all possible confounders, with the corresponding 95% CIs, for LBW concerning exposure of interest.

Results

A total of 126 cases and 126 controls were included in the study (Table 1). The mean age in the cases and controls was 25.9 (standard deviation; 7.06) and 25.2 (5.48) years, respectively. Most cases and controls were aged 20–29 years. In the case group, 67 (53.2%) women did not complete their primary education and 59 (46.8%) who did. In the control group, 58 (46%) women did not complete their primary education and 68 (54%) did. In terms of occupation, 116 (92.1%) women in the case group were housewives and 10 (7.9%) worked outside the home. In the control group, 113 (89.7%) women were housewives and 13 (10.3%) worked outside the home. There was no significant association between cases and controls concerning sociodemographic and socioeconomic characteristics.

Birth interval 2 and 3). However, in multivariate analysis, the only significant risk factor for LBW was birth interval

Discussion

LBW is a significant cause of morbidity and mortality among neonates and children (8). Infants' gestational age has a vital role in determining BW. There is an increased risk of LBW for premature infants (

Recommendations can be made to reduce the prevalence of LBW. Screening should be conducted by healthcare professionals of pregnant women with high risks of delivering LBW

infants, especially if the mothers have a birth interval

Conclusion

Risk factors for LBW identified in this study can be reduced and prevented by improving maternal health education, especially on pregnancy spacing.

Funding: None

Competing interests: None declared.

Facteurs de risque reproductifs et comportementaux liés au faible poids de naissance chez les nouveau-nés de l’hôpital Al Thawra de Sanaa au Yémen

Résumé

Contexte : Un faible poids de naissance peut entraîner la mort du nourrisson, en particulier pendant la première année de vie.

Objectifs : La présente étude visait à évaluer les facteurs de risque liés au faible poids de naissance des enfants nés à Sanaa au Yémen.

Méthodes : Nous avons mené une étude cas-témoins non appariés auprès de 252 femmes venues accoucher à l’hôpital Al Thawra de Sanaa, au Yémen, entre août et octobre 2016.

Résultats : Les facteurs de risque significatifs du faible poids de naissance étaient un intervalle entre deux naissances inférieur à deux ans, des antécédents de pré-éclampsie pendant la grossesse concernée, l’âge gestationnel prématuré inférieur à 37 semaines et la consommation de khat ou le tabagisme pendant la grossesse. Après contrôle de tous les facteurs de confusion, seul un intervalle entre deux naissances inférieur à deux ans était significativement associé à un faible poids de naissance.

Conclusion : La réduction de l’intervalle entre les naissances représente un facteur de risque important de faible poids de naissance ; par conséquent, il convient de mettre l’accent sur une

meilleure sensibilisation des mères sur ce point à l’occasion du suivi postnatal.

[illegible]

[illegible]

[illegible]

case–control study. Int J Med Sci Public Health. 2015; 4(7):987–90. http://dx.doi.org/10.5455/ijmsph.2015.20032015203

3. Deshpande Jayant D, Phalke DB, Bangal VB, D Peeyuusha BS. Maternal risk factors for low birth weight neonates: a hospital based case control study in rural area of Western Maharashtra, India. Natl J Commun Med. 2011 Oct–Dec; 2(3):394–8.

4. Child health USA 2011. Rockville, MD: US Department of Health and Human Services, Health Resources and Services Administration; 2011 (http://mchb.hrsa.gov/, accessed 14 May 2020).

5. Paramita S, Sharma N, Benjamin AI. Risk factors for low birth weight: a case control study in Ludhiana Punjab. Indian J Matern Child Health. 2009;11(1–4):9.

6. Riniker KS. Women's health in Yemen: factors influencing maternal and infant health, fertility rates, the public health care system, education, and globalization. J Global Health Perspect. 2012.

7. Bener A, Salameh KM, Yousafzai MT, Saleh NM. Pattern of maternal complications and low birth weight: associated risk factors among highly endogamous women. ISRN Obstet Gynecol. 2012; 2012:540495. http://dx.doi.org/10.5402/2012/540495 PMID:22991672

8. Sutan R, Mohtar M, Mahat AN, Tamil AM. Determinant of low birth weight infants: a matched case control study. Open J Prev Med. 2014;4:91–9.

9. Demelash H, Motbainor A, Nigatu D, Gashaw K, Melese A. Risk factors for low birth weight in Bale zone hospitals, South-East Ethiopia: a case–control study. BMC pregnancy and childbirth. 2015 Oct 13;15:264. http://dx.doi.org/10.1186/s12884-015-0677-y PMID:26463177

10. Abdel-Aleem MA. Khat chewing during pregnancy: an insight on an ancient problem impact of chewing khat on maternal and fetal outcome among Yemeni pregnant women. J Gynaecol Neonat Biol. 2015; http://dx/doi.org/10.15436/2380-5595.15.004

11. Zheng W, Suzuki K, Tanaka T, Kohama M, Yamagata Z, Okinawa Child Health Study Group. Association between maternal smoking during pregnancy and low birthweight: effects by maternal age. PLoS One. 2016 Jan 21;11(1):e0146241. http://dx.doi.org/10.1371/journal.pone.0146241 PMID:26795494

12. Stojanović M, Bojanić V, Musović D, Milosević Z, Stojanović D, Visujić A et al. Maternal smoking during pregnancy and socioeconomic factors as predictors of low birth weight in term pregnancies in Niš. Vojnosanit Pregled. 2010 Feb;67(2):145–50 (in Serbian) http://dx.doi.org/10.2298/vsp1002145s PMID:20337097

Friday 12th of July 2024 07:00:15 AM