



Letter to Editor

Adding “pregnancy” to the Centor score, aim to reduce maternal death



Sir,

We read with interest the manuscript entitled “The most common causative bacteria in maternal sepsis-related deaths in Japan were group A Streptococcus: A nationwide survey.” by Tanaka et al. [1]. In 1981 Centor et al. reported the scoring system to whom to use rapid test of group A streptococcus (GAS) infection [2]. In this Centor score, younger age (less than 15-year-old) is listed as one of the items to diagnose GAS infection which because of the higher incidence than other population. In addition to that, it is important for rapid diagnosis of GAS for younger age because of weaker immune system compare to adult. Reflect that implication, McIsaac added one more item, less than 3 year old, to the Centor score [3]. However, I think there is another population should be considered as weaker immune, and offer a suggestion to add “pregnancy” to modify Centor score.

In Japan, there is a committee called the maternal death report program which analyze the cases of maternal death to prevent maternal death. According to their reports, 7% of maternal or postpartum deaths were caused by infection [4,5]. Among them, GAS infection was the most common causative bacteria [1,4,5]. Most of the cases were rapidly progressed infection and GAS was not detected nor even to be thought until the patients' condition got worth. One of the different diagnoses in the winter season is influenza. From 2009 to 2010, H1N1 influenza is spread worldwide and many pregnant died. However, no pregnant women dead due to H1N1 influenza infection in Japan [6], because of two reasons: easy access to rapid test for influenza and prophylactic use of anti-influenza medications. Considering this event, easy access to rapid test may have a potential to reduce GAS infection related maternal death. Maternal death caused by GAS infection is preventable death, if the antibiotics were properly administered. In the meantime, empirical treatment with antibiotics are one of the main causes of resistant bacteria and also not recommended from

economical point of view. Thus, proper diagnosis with rapid test is important.

For those reasons, we think it might be good to add “pregnancy” to modify Centor score.

References

- [1] Tanaka H, Katsuragi S, Hasegawa J, Tanaka K, Osato K, Nakata M, et al. The most common causative bacteria in maternal sepsis-related deaths in Japan were group A Streptococcus: a nationwide survey. *J Infect Chemother* 2019;25:41–4.
- [2] Centor RM, Witherspoon JM, Dalton HP, Brody CE, Link K. The diagnosis of strep throat in adults in the emergency room. *Med Decis Mak* 1981;1:239–46.
- [3] McIsaac WJ, White D, Tannenbaum D, Low DE. A clinical score to reduce unnecessary antibiotic use in patients with sore throat. *CMAJ* 1998 Jan 13;158:75–83.
- [4] Hasegawa J, Ikeda T, Sekizawa A, Tanaka H, Nakamura M, Katsuragi S, et al. Maternal death exploratory committee in Japan and the Japan association of obstetricians and gynecologists. Recommendations for saving mothers' lives in Japan: report from the maternal death exploratory committee (2010–2014). *J Obstet Gynaecol Res* 2016;42:1637–43.
- [5] Hasegawa J, Sekizawa A, Tanaka H, Katsuragi S, Osato K, Murakoshi T, et al. Maternal death exploratory committee in Japan: Japan association of obstetricians and gynecologists. Current status of pregnancy-related maternal mortality in Japan: a report from the maternal death exploratory committee in Japan. *BMJ Open* 2016;6:e010304.
- [6] Nakai A, Saito S, Unno N, Kubo T, Minakami H. Review of the pandemic (H1N1) 2009 among pregnant Japanese women. *J Obstet Gynaecol Res* 2012;38:757–62.

Jun Takeda*, Satoru Takeda
Department of Obstetrics and Gynecology, Juntendo University
Faculty of Medicine, Tokyo, Japan

* Corresponding author.
E-mail address: jtakeda@juntendo.ac.jp (J. Takeda).

27 May 2019
Available online 26 July 2019