

# Dilemmas and Facts about Menstrual Cups: Is the Hype Safe?

Tamseel Tanwir Awan<sup>1\*</sup> and Tabeer Tanwir Awan<sup>2</sup>

<sup>1</sup>Professional Development Centre, Dow University of Health Sciences, Karachi, Pakistan

<sup>2</sup>Department of Internal Medicine, Aga Khan University, Karachi, Pakistan

## Dear Editor,

Menstruation is an important phenomenon that marks the transition of a woman's body from childhood to puberty and the beginning of the reproductive age in a female's life. Even though it is a regular biological cycle, the majority of girls in lower and middle-income nations feel anxiety, bewilderment, embarrassment, and anguish as they try to adjust to their monthly period due to societal concerns and a lack of advice. Similarly, in Pakistan, there is a scarcity of knowledge about menstrual hygiene management among menstruating women. This is also due to the lack of adequate resources required by women during their menstrual cycles, proper hygiene, awareness regarding infections due to unhealthy menstrual practices, and knowledge about newly introduced menstrual products. The menstrual cup is an alternative to sanitary pads and tampons for menstrual hygiene management.

Menstrual cups are made from medical-grade silicone or latex and are inserted into the vagina to collect menstrual blood. They can be reused for several years, reducing waste generated by disposable pads and tampons. One of the most significant advantages of menstrual cups is their cost-effectiveness [1]. While the upfront cost of purchasing a menstrual cup may be higher than that of disposable products, in the long run, they can save a significant amount of money. A single menstrual cup can last for up to ten years, which means that the cost per use is much lower than that of disposable pads or tampons [2]. In addition to their cost-effectiveness, menstrual cups are also better for the environment. Every year, billions of disposable menstrual products end up in landfills and oceans, which can take hundreds of years to break down. Menstrual cups, on the other hand, are reusable and produce far less waste. They can be worn for up to 12 hours, which means that they do not need to be changed as frequently as disposable products. They are also easy to clean and can be sterilized by boiling them in water. However, there is a small risk of leakage when using a menstrual cup. A systematic review and meta-analysis of 43 studies found that four studies made a direct comparison between menstrual cups and usual products for the main outcome of leakage and reported

leakage was similar or lower for menstrual cups than for disposable pads or tampons. However, the study noted that the rate of leakage varied widely between studies and depended on factors like cup size, insertion technique, and the user's level of experience [3].

In recent years, there has been a considerable rise in awareness, advocacy, and usage of menstrual cups among women in Pakistan primarily on social media and online search terms, due to the above-mentioned benefits. However, there have not been sufficient research studies conducted in Pakistan to address the perspectives of menstruating women regarding the safety and acceptability of menstrual cups. Research conducted in Karachi among the general population and healthcare workers concluded that the vast majority of women were unaware of menstrual cups. According to the findings of this study, these women included 88.6% of females in the general population and 57.6% of healthcare professionals [4]. The most prevalent reason for not advocating the usage of menstrual cups among women might be because it is viewed as awkward or unusual to use, unavailability in local stores, or because they are too expensive. According to a study at a rural tertiary care hospital in India, 80% of research participants were acquainted with the menstrual cup. The majority of them learned about it *via* the media, family, and friends. Although many of the respondents were aware of the use of the menstrual cup, the acceptability of the menstrual cup is still yet to be achieved. There is a significant disparity in women's awareness and acceptance of the menstrual cup [5]. On the contrary, using menstrual cups for menstrual hygiene management among Nepalese schoolgirls and Iranian menstruating women appears feasible and acceptable, as they perceive that it offers practical, economical, and environmental benefits [6, 7].

There is some evidence to suggest that using menstrual cups does not adversely affect vaginal pH or microbiome. There is also decreased risk of vaginal infections in women using menstrual cups as compared to sanitary pads and tampons [3].

In contrast to the benefits and acceptability of menstrual cups, there are certain disadvantages as well, the most life-threatening is the concern about toxic shock syndrome (TSS) related to the use of menstrual cups. TSS is a rare but potentially life-threatening condition that can be caused by the buildup of toxins produced by certain strains of bacteria. While TSS can be associated

\*Corresponding author: Tamseel Tanwir Awan, Professional Development Centre, Dow University of Health Sciences, Karachi, Pakistan; Email: tamseel.awan@duhs.edu.pk

Received: March 01, 2023; Revised: April 12, 2023; Accepted: April 28, 2023

DOI: <https://doi.org/10.37184/lnjpc.2707-3521.5.34>

with the use of tampons, there have been reports of TSS occurring in individuals who use menstrual cups.

Mitchell *et al.* published the first comprehensive case of TSS associated with menstrual cup usage in a 37-year-old woman. MSSA was found in the blood and urine cultures, and the case was effectively treated with Linezolid with a combination of clindamycin [8]. Menstrual cup-associated TSS has been reported in the Philippines, Germany, and the United States as well [9-11]. Case definition criteria verified the diagnosis, which was supported by a vaginal discharge culture of methicillin-resistant *Staphylococcus aureus*. The patients were treated empirically with antibiotics, which resulted in effective treatment and no recurrence. However, there has not been a single case of menstrual cup-associated TSS reported in Pakistan yet.

It is important to note that the risk of TSS with menstrual cups is low, and some steps can be taken to minimize the risk even further. The key to preventing TSS is to maintain good hygiene and follow the manufacturer's instructions for using and caring for the menstrual cup.

One of the most important things to remember is to wash your hands thoroughly before inserting or removing the menstrual cup. It is also recommended to sterilize the cup before the first use and between cycles. This can be done by boiling the cup in water for a few minutes. It is also important to avoid leaving the menstrual cup in for too long. While menstrual cups can be worn for up to 12 hours, it is recommended to empty and clean the cup at least every 8 hours. If symptoms of TSS are experienced, such as high fever, vomiting, diarrhea, dizziness, or a rash, it is important to seek medical attention immediately. While TSS is rare, it can progress quickly and can be life-threatening if left untreated.

The gynecological and internal medicine clinicians in Pakistan should be vigilant towards such case findings and case reports should be published regarding menstrual cup-associated TSS. This can further benefit our clinicians and physicians in managing such cases for our population. Furthermore, public awareness regarding the safe usage of menstrual cups must be carried out to prevent toxic shock syndrome, vaginal infections, and allergic reactions that menstrual cups can cause in menstruating women.

## CONFLICT OF INTEREST

The authors declare no conflict of interest.

## ACKNOWLEDGEMENTS

Declared none.

## REFERENCES

1. Ballal K. S, Bhandary A. Menstrual cup: awareness among reproductive women. *Int J Reprod Contracept Obstet Gynecol* 2020; 9(4): 1382-7. DOI: <http://dx.doi.org/10.18203/2320-1770.ijrcog20201066>
2. Bekinska ME, Smit J, Greener R, Todd CS, Lee MT, Maphumulo V, *et al.* Acceptability and performance of the menstrual cup in South Africa: a randomized crossover trial comparing the menstrual cup to tampons or sanitary pads. *J Womens Health (Larchmt)* 2015; 24(2): 151-8. DOI: <http://dx.doi.org/10.1089/jwh.2014.5021>
3. van Eijk AM, Zulaika G, Lenchner M, Mason L, Sivakami M, Nyothach E, *et al.* Menstrual cup use, leakage, acceptability, safety, and availability: a systematic review and meta-analysis. *Lancet Public Health* 2019; 4(8): e376-93. DOI: [http://dx.doi.org/10.1016/s2468-2667\(19\)30111-2](http://dx.doi.org/10.1016/s2468-2667(19)30111-2)
4. Ali SA, Baloch M, Riaz L, Iqbal A, Riaz R, Perveen B, *et al.* Perceptions, practices, and challenges regarding menstrual hygiene among women in Karachi, Pakistan: a comparison between general population and healthcare workers. *Cureus* 2020; 12(8): e9894 DOI: <http://dx.doi.org/10.7759/cureus.9894>
5. Meghana S, Gomathy E. Knowledge, attitude, and practices regarding menstrual cup among reproductive women in a rural tertiary care Hospital. *Int J Clin Obstet Gynaecol* 2021; 5(2): 211-4. DOI: <http://dx.doi.org/10.33545/gynae.2021.v5.i2d.889>
6. Pokhrel D, Bhattarai S, Emgård M, von Schickfus M, Forsberg BC, Biermann O. Acceptability and feasibility of using vaginal menstrual cups among schoolgirls in rural Nepal: a qualitative pilot study. *Reprod Health* 2021; 18(1): 20. DOI: <http://dx.doi.org/10.1186/s12978-020-01036-0>
7. Gharacheh M, Ranjbar F, Hajinasab N, Haghani S. Acceptability and safety of the menstrual cups among Iranian women: a cross-sectional study. *BMC Women's Health* 2021; 21(1): 105. DOI: <http://dx.doi.org/10.1186/s12905-021-01259-8>
8. Mitchell MA, Bisch S, Arntfield S, Hosseini-Moghaddam SM. A confirmed case of toxic shock syndrome associated with the use of a menstrual cup. *Can J Infect Dis Med Microbiol* 2015; 26(4): 218-20. DOI: <http://dx.doi.org/10.1155/2015/560959>
9. Santos AI, Montinola-Morales M. A confirmed case of menstrual cup-associated toxic shock syndrome: A Philippine perspective. *Philippine J Obstet Gynecol* 2022; 46(1): 44-9. DOI: [http://dx.doi.org/10.4103/pjog.pjog\\_8\\_22](http://dx.doi.org/10.4103/pjog.pjog_8_22)
10. Christian Neumann, Rene Kaiser, Judith Bauer. Menstrual cup-associated toxic shock syndrome. *Eur J Case Rep Intern Med* 2020; 7(10): 001825. DOI: [http://dx.doi.org/10.12890/2020\\_001825](http://dx.doi.org/10.12890/2020_001825)
11. El Soufi H, El Soufi Y, Al-Nuaimi S, Bagheri F. Toxic shock syndrome associated with menstrual cup use. *IDCases*. 2021; 25: e01171. DOI: <http://dx.doi.org/10.1016/j.idcr.2021.e01171>