

Prejudice and Truth about the Effect of Plastic Adhesive Incise Drape

Dear Editor-in-Chief,

We appreciate the efforts of all companies that involved in the production of plastic adhesive incise drape (PAID). The aim of producing PAIDs is creating physical barrier to prevent objects like gloves, instruments, and sponges from coming into contact with the patient's skin flora, reducing the risk of surgical wound contamination (SWC) that could cause a costly and potentially devastating surgical site infection (SSI).

However, the key question is whether PAIDs can really prevent SWC and SSI?

Some companies point out that there are different PAIDs on the market and recommend conclusions and judgments regarding the effects of PAIDs should not be generalized to the entire PAIDs manufacturing companies and their category. Because, based on the reports provided from articles, PAIDs have different features like adhesion to skin and antimicrobial properties that are considered important factors.^[1] From the past to the present, the disappointing results of the studies regarding effect of PAIDs had been inconsistent with the tempting commercials of PAIDs manufacturing companies. PAIDs are currently widely used during a range of surgical procedures. However, so far none of them has been demonstrated to reduce postoperative SSI. In the recently Cochrane review, *Webster and Alghamdi* (2015) found that a higher proportion of patients developed SSI with PAIDs than with no PAIDs (risk ratio (RR) = 1.23; 95% confidence interval (CI): 1.02-1.48; $P = 0.03$). They also demonstrated that no difference in SSIs when either the iodine-impregnated incise drape or normal woven drapes were used (RR = 1.03; 95% CI = 0.06-1.66; $P = 0.89$). PAIDs cannot prevent SSI and may somehow increase it.^[1] The world health organization (WHO) reported that there are not enough evidences to support use of PAIDs in surgeries and then recommended PAIDs (with or without antimicrobial properties) should not be used for the purpose of preventing SSI against its use.^[2] A systematic review and meta-analysis by *Eckler et al.* showed PAIDs may increase the incidence of SSI after cesarean delivery.^[3]

Our study about the effect of PAID on contamination rate of surgical wound showed using PAID is unable to reduce SWC in clean lumbar spine surgery^[4] and surgeons

should be aware that use of PAIDs can itself recolonize or regrowth the skin flora.^[5]

We suggest avoid using any kind of PAIDs until the effects of using them in reduction of SWC and SSI rate has been reported unambiguously through more randomized controlled trial studies.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

**Fatemeh Maraki, Mohammadreza Zarei¹,
Akram Aarabi², Saeed Jazini Dorcheh³**

Department of Operating Room, Borojen School of Nursing, Shahrekord University of Medical Sciences, Shahrekord, ¹Department of Operating Room, Faculty of Nursing and Midwifery, Kashan University of Medical Sciences, Kashan, ³Department of Operating Room, School of Nursing and Isfahan University of Medical Sciences, ²Assistant Professor, Nursing and Midwifery Care Research Center, School of Nursing and Midwifery, Isfahan University of Medical Sciences, Isfahan, Iran

Address for correspondence:

*Mr. Mohammadreza Zarei,
Department of Operating Room, Faculty of Nursing and Midwifery,
Kashan University of Medical Sciences, Kashan, Iran.
E-mail: Mohammad.zarei3113@gmail.com*

Received: 26 Feb 20 **Accepted:** 10 Sep 20

Published: 26 Oct 21

References

1. Webster J, Alghamdi A. Use of plastic adhesive drapes during surgery for preventing surgical site infection. *Cochrane Database Syst Rev* 2015;22:Cd006353.
2. Allegranzi B, Bischoff P, de Jonge S, Kubilay NZ, Zayed B, Gomes SM, *et al.* New WHO recommendations on preoperative measures for surgical site infection prevention: An evidence-based global perspective. *Lancet Infect Dis* 2016;16:e276-87.
3. Eckler R, Quist-Nelson J, Saccone G, Ward H, Berghella V. Adhesive incisional drapes during cesarean delivery for preventing wound infection: A systematic review and meta-analysis of randomized controlled trials. *European Journal of Obstetrics & Gynecology and Reproductive Biology* 2019;4:100090.
4. Zarei M, Tabesh H, Fazeli H, Aarabi A. Effect of incise drape on contamination rate of surgical wound during surgical procedures

Letter to Editor

of lumbar spine. *Adv Biomed Res* 2019;8:8.

5. Zarei M, Larti N, Tabesh H, Ghasembandi M, Aarabi A. Does plastic incise drape prevent recolonization of endogenous skin flora during lumbar spine procedures? *Int J Prev Med* 2019;10:162.

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 license, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

Access this article online	
Quick Response Code: 	Website: www.ijpvmjournal.net/www.ijpm.ir
	DOI: 10.4103/ijpvm.IJPVM_422_19

How to cite this article: Maraki F, Zarei M, Aarabi A, Dorcheh SJ. Prejudice and truth about the effect of plastic adhesive incise drape. *Int J Prev Med* 2021;12:144.

© 2021 International Journal of Preventive Medicine | Published by Wolters Kluwer - Medknow