

ABCD-Stoma[®]

Japanese Society of Wound, Ostomy, and Continence Management

Development history of an evaluation scale of the severity of peristomal skin disorders

Peristomal disorders can easily deteriorate if without adequate care at initial stages, resulting in physical distresses including pain and itching. Furthermore, it can lead to the patient's degradation of quality of life due to the inability to wear ostomy appliance and accessories¹. In order to cure those skin disorders at their initial stages, it is necessary for healthcare workers and professionals involved in the care to evaluate the condition of those skin disorders from the same viewpoint, to assess the root cause, and to provide appropriate care thereof. For this purpose, it is essential to have tools that can be commonly used by healthcare workers and professionals. There are other tools available for stoma such as Ostomy Skin Tool², SACS Instrument³, Stoma Care Ostomy Research Index⁴. Such tools are equipped with capabilities of observation and assessment, but there have been no tools that can be used to derive appropriate types and routines of care. In response to this, Japanese Society of Wound, Ostomy, and Continence Management has developed a tool with the goal of satisfying the following three conditions: (1) that any healthcare worker and professional involved in stoma care can evaluate skin disorders in one common language, (2) that they can quantify the severity of such skin disorders by a scoring system and track their symptoms' progression, and (3) that the system can be utilized to assess the root cause and causal factors of such skin disorders and to help the workers and professionals in providing appropriate care interventions based on such assessment.

For the purpose of giving healthcare workers and professionals an ability to make an objective assessment, we have first developed an evaluation scale which aim was to use the severity factor to decide the healing days, based on the result obtained from our qualitative study. Items of such evaluation scale were determined by conducting qualitative examinations on the characteristics of the concept framework. Then the weight of each item was statistically calculated through our prospective studies. Based on the foregoing, we have completed the development of "ABDC-Stoma[®]" in 2012, the evaluation scale of the severity of peristomal skin disorders⁵.

ABCD-Stoma®

The term “ABCD-Stoma®” is named by combining the first letters of “adjacent”, “skin barrier”, “circumscribing” regions of a stoma, and “discoloration” thereof. The mucous membrane condition of stoma is not evaluated by “ABCD-Stoma®”. It is designed to evaluate the degree of peristomal skin disorders and their regions, in addition to presence/absence of skin discoloration (Fig. 1).

1. How to use ABCD-Stoma®

Firstly, the peristomal skin is to be divided into three regions: A, B, and C. Each of them is to be evaluated on an independent basis (Fig. 2). To evaluate the peristomal skin, the ostomy appliance and accessories must be removed first followed by cleaning of the surrounding area. A removed stoma’s faceplate must be observed and if you find part of skin barrier has dissolved, the dissolved area is to be categorized as region “A”.

Secondly, begin evaluating each of the regions A, B, and C by the degree of skin disorders: no disorder=0 point, erythema=1, erosion=2, blisters/pustules=3, and ulceration/tissue overgrowth=15. “Erythema” refers to redness that disappears under pressure regardless of the degree of its redness. “Erosion” refers to loss in epidermis and upper layer of dermis. Within this evaluation scale, epidermal detachment is to be included under “Erosion” category. “Blisters/pustules” refers to a condition where fluid (including pus) accumulates and being retained in epidermis or dermis. The size of blisters/pustules is not to be interrelated with the points of evaluation. “Ulceration” refers to loss in epidermis and up to deeper layer of dermis or subcutaneous fatty tissue while “Tissue Overgrowth” refers to tissue elevation above skin level by the factors (excluding blisters/pustules) including pseudoepitheliomatous hyperplasia, hypergranulation, or the result of mucosal implantation. If conflicting degrees of skin disorders are present in the same region, the disorder with the highest score is to be adopted regardless of the size of such disorder. In addition, the region C is to be categorized as “no disorder” in case where there is no physical contact with the skin due to no-use of medical tapes or a stoma bag being small/folded, as there is no relevant region.

As for the region D, “discoloration” is to be evaluated by the presence/absence of hyperpigmentation and hypopigmentation in each of three regions of A, B, and C. “DP” indicates presence of hyperpigmentation and “DH” presence of hypopigmentation. The alphabet P of DP stands for hyper-pigmentation while the alphabet H of DH stands for hypopigmentation. No points are to be assigned in this evaluation.

Lastly, add up the scores of all three regions and record the result in the following format: “A[]B[]C[]:(total points) D[]” (e.g., A15B0C1:16DP). If you add up the degree score of skin disorders calculated in each of the three regions of A, B, and C, the total number of points is to range from 0 to 45. The smaller the score, the less severity

Fig. 1-1 ABCD-Stoma®

Evaluation Scale of the Severity of Peristomal Skin Disorder

ABCD-Stoma®

Patient ID: _____ Patient Name: _____

Stoma type: Colostomy · Ileostomy · Urostomy

Monitoring points (excluding mucous membrane)

- A: Adjacent (area near the stoma where the skin barrier has dissolved)
- B: Barrier (skin barrier)
- C: Circumscribing (area outside of skin barrier where medical tape, ostomy bag, belt, or other accessories were attached)

Evaluate the degree of skin disorder for each of the 3 areas:

0	No disorder	
A c u t e	1	Erythema Redness that disappears when pressure is applied Degree of redness is irrelevant
	2	Erosion Includes epidermal or papillary dermal damage and epidermolysis
	3	Blister/Pustule Accumulation of fluid (including pus) in the epidermis or dermis
C h r o n i c	15	Ulceration/Tissue Overgrowth Damage extending up to the epidermis and reticular dermis or up to subcutaneous adipose tissue; excludes blisters and pustules; tissue elevated above skin level

A + B + C =

Evaluate the overall discoloration of areas A, B, and C combined

D i s c o r a t i o n	0	None	D <input type="text"/>
	P	Pigmentation Change to brown or black due to increase in melanin 	
H	Hypopigmentation Change to white due to decrease in melanin 	Scoring results: A <input type="text"/> B <input type="text"/> C <input type="text"/> : <input type="text"/> D <input type="text"/>	

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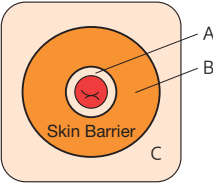
Fig. 1-2 ABCD-Stoma®

Evaluation Scale of the Severity of Peristomal Skin Disorders

How to Use ABCD-Stoma®

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- Evaluate the degree of peristomal skin disorders and their regions, in addition to presence or absence of skin discoloration (excluding mucosal membranes).
- Peristomal skin is to be divided into the regions of A, B, and C.



- A (Adjacent region): the area from the skin-stoma junction to the edge of skin barrier. In case the skin barrier has dissolved, the dissolved area is considered as region A.
 - B (Barrier region): the area of skin in contact with the skin barrier (one of the stoma accessories).
 - C (Circumscribing region): the area to which the medical tape, stoma bag, belt, or other equipment or accessories were attached onto.
- The degree of skin disorders is to be evaluated individually for three regions of A, B, and C.
 - Point Assignment: no disorder = 0, erythema=1, erosion= 2, blisters/pustules=3, ulceration/tissue overgrowth=15.
 - Erythema, erosion, and/or blisters/pustules represents an acute condition whereas ulceration/tissue overgrowth indicates a chronic condition.
 - Tissue overgrowth is defined as tissue elevation above skin level excluding blisters/pustules (e.g., pseudoepitheliomatous hyperplasia).
 - If conflicting degrees of skin disorders are present in the same region, the disorder with the highest score is to be adopted regardless of the size of such disorder.
 - If there is no area considered as the region C, assign “no disorder” because no evaluation can be conducted.
- D (discoloration) is to be evaluated by presence or absence of hyperpigmentation and hypopigmentation in three regions of A, B, and C.
 - “DP” indicates presence of hyperpigmentation and “DH” presence of hypopigmentation.
 - The alphabet P of DP stands for hyperpigmentation.
 - The alphabet H of DH stands for hypopigmentation.
 - No points are to be assigned in this evaluation.
- Use the pictures attached to the evaluation scale as your reference when evaluating the skin disorders and assigning points thereof.
- Calculation of the total score.
 - Add up the points assigned to three regions.
 - The total number of points ranges from 0 to 45.
- The score is to be described in the following format:

A[]B[]C[]:(total points) D[]

e.g., A 2 B 3 C 0 : 5 D0, A15B 0 C 1 :16DP, A 0 B 0 C 1 : 1 DPH

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Citation from “ABCD-Stoma® Care: basic skin care based on ABCD-Stoma®”
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Journal of Japanese Society of Wound, Ostomy, and Continence Management, Tokyo (2014:14)

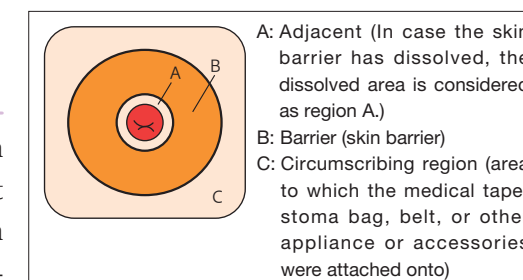
of relevant skin disorders.

2. Notes

Even if there is a disorder identified in the peristomal skin, there are cases that it may not be interpreted as one of the skin disorders which are stipulated by ABCD-Stoma®. For example, think of a case where you observe suture wounds in the regions of A, B, or C. Any change observed in such wounds are interpreted as a normal healing process triggered by surgical effects, and thus to be omitted from the scoring targets. Furthermore, ABCD-Stoma® has been developed to evaluate the skin conditions. Therefore, any stoma’s mucocutaneous separation (a surgical complication that occurs at the boundary of stoma’s mucous membrane and skin) is to be omitted from the scoring targets (Fig. 3).

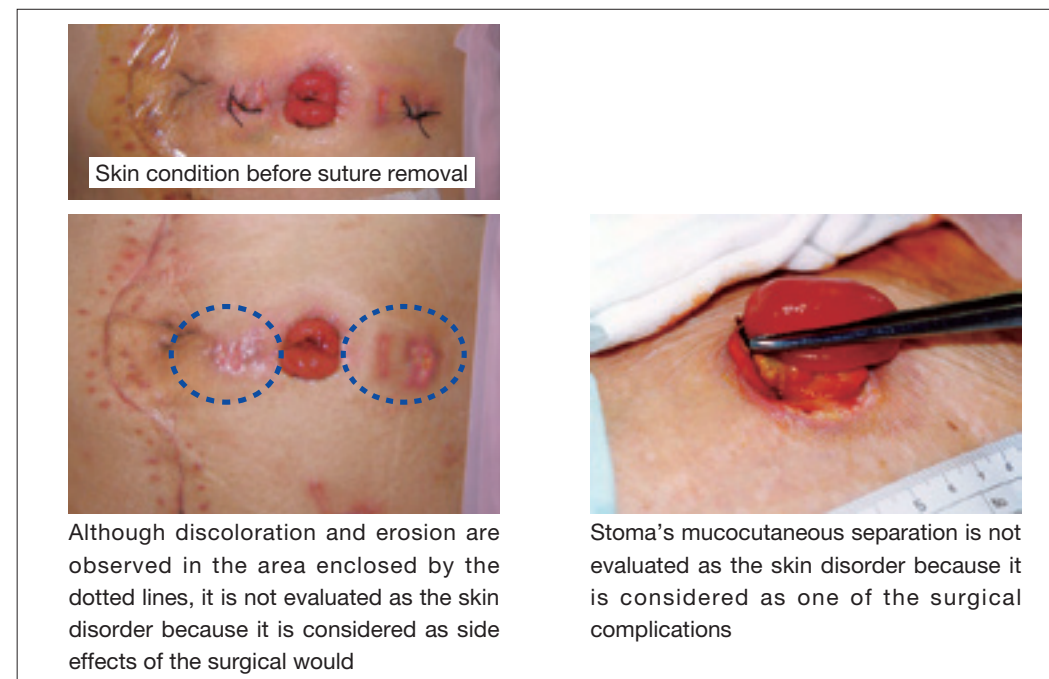
At the time of your evaluation, always be careful not to evaluate “Erythema” immediately after the removal of face plates, medical tapes, or other equipment or

Fig. 2 Regions of Peristomal Skin



Citation from “ABCD-Stoma® Care: basic skin care based on ABCD-Stoma®”
Japanese Society of Wound, Ostomy, and Continence Management ed.
Journal of Japanese Society of Wound, Ostomy, and Continence Management, Tokyo (2014:15)

Fig. 3 Case not interpreted as one of the skin disorders stipulated by ABCD-Stoma® evaluation



Citation from Chizuko Konya: “Prevention of peristomal skin disorders and their care methods”.
Japanese Society of Wound, Ostomy, and Continence Management ed.: “Guidebook on skin cares”. Shorinsha Inc., Tokyo (2017:249).

accessories because reactive hyperemia/erythema are often erroneously observed. Evaluate “Erythema” just before attaching such equipment or accessories.

3. Clinical significance of using ABCD-Stoma®

ABCD-Stoma® can help to prevent deterioration of skin disorders after social rehabilitation by providing guidance not only to healthcare workers and professionals but also to stoma carriers how to observe their peristomal skin condition themselves using this evaluation scale after their stoma construction and when to seek medical assistance based on the score equal to or more than one. The reliability of this evaluation scale has already been verified that whether it can be correctly evaluated by healthcare workers, professionals and patients^{5,6} or not. In addition, we have already verified the predictive validity of the total score calculated by ABCD-Stoma® for future cure probabilities; the standard cut-off values indicate that “healing within 28 days” if the score is 3 or less, and “healing within 29 to 56 days” if the score is 4⁵.

Conclusion

ABCD-Stoma® can be used to observe peristomal skin condition and can be adopted as an evaluation index of care quality, in a manner similar to that of DESIGN-R®2020, the pressure ulcer’s evaluation scale. Therefore, we aim to accumulate expertise and to fully make use of what we learn to review existing types and routines of care, for the purpose of further improving the quality of stoma care.

Citations

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