CSIRO PUBLISHING

LETTER TO THE EDITOR
https://doi.org/10.1071/SH22029

SEXUAL HEALTH

Delayed pressure urticaria manifesting as dyspareunia – is it that uncommon?

George N. Konstantinou[A,*,#] and Indrashis Podder[A,B,#]

For full list of author affiliations and declarations see end of paper

*Correspondence to:
George N. Konstantinou
424 General Military Training Hospital, Thessaloniki, Greece
Email: gnkonstantinou@gmail.com

#These authors contributed equally to this paper

Handling Editor:
Somesh Gupta

ABSTRACT

Delayed pressure urticaria (DPU) is a variant of physical urticaria characterised by reproducible whealing on application of sustained pressure to the skin. Clinical manifestations include delayed cutaneous erythema, edema and subcutaneous swelling, typically occurring 4–6 h after application of mechanical pressure. Dyspareunia is defined as persistent or recurrent pain in the genital area or within the pelvis that occurs just before, during, or after sexual intercourse. We report an unusual case of DPU manifesting as dyspareunia.

Keywords: awareness, delayed pressure urticaria, dermographometer, dyspareunia, inducible urticaria, mucosal, omalizumab, physical urticaria.

Delayed pressure urticaria (DPU) is a variant of physical urticaria characterised by reproducible whealing on application of sustained pressure to the skin. Clinical manifestations include delayed cutaneous erythema, edema and subcutaneous swelling, typically occurring 4–6 h after application of mechanical pressure.[1] The lesions may be accompanied by pruritus, burn, pain or any combination of these symptoms.[2] DPU may be associated with concomitant chronic spontaneous urticaria (CSU), angioedema and other inducible urticarias.[1,2]

Dyspareunia is defined as the persistent or recurrent pain in the genital area or within the pelvis that occurs just before, during, or after sexual intercourse and the pain may vary in intensity. Although it is more common in women, it can occur in men, as well.

To the best of our knowledge, concomitant DPU and dyspareunia has not been reported in a female patient before. We report a 37-year-old woman with DPU who presented with persistent dyspareunia after sexual intercourse.

A 37-year-old, otherwise healthy white woman, presented with intensely burning and painful red diffuse swelling of her skin at pressure sites, which developed 5–6 h after wearing tight clothes, shoes, belts, underwear, watches, or leaning against hard surfaces. Each individual wheal lasted for approximately 24 h, and this phenomenon occurred intermittently for the past 6 years. Her symptoms were transiently relieved by second-generation antihistamines but recurred on discontinuation. On further questioning, she revealed transient and severe vulval swelling and pain after sexual intercourse (dyspareunia), irrespective of condom use, which started 6 months before her angioedema episodes. Occasionally her symptoms became so severe that she had to abstain from intercourse and this has been impacting her sexual life lately. Interestingly, the sexual symptoms occurred in the second part of her menstrual cycle. Her past medical and surgical histories were unremarkable.

Gynaecological examination of the vulval area was non-contributory and no vaginal discharge was noted. DPU was confirmed by the development of delayed wheals (>6 h) at the test site after applying a calibrated dermographometer perpendicularly to her upper back at 100 g/mm^2 (981 kPa) for 70 s.[3] Testing for immediate dermographism was negative. Hair, nail and mucosae were spared while remaining general and systemic examination was within normal limits. We managed her episodic dyspareunia with oral methylprednisolone 8 mg twice a day started at least 2 days prior to intercourse (only during the second part of her menstrual cycle as her first part was asymptomatic). We advised second-generation antihistamines (up-dosed up to four-times their standard

Received: 15 February 2022
Accepted: 7 July 2022
Published: 2 August 2022

Cite this:
Konstantinou GN and Podder I (2022) *Sexual Health*, **19**(5), 488–489.
doi:10.1071/SH22029

© 2022 The Author(s) (or their employer(s)). Published by CSIRO Publishing.

dose) for her DPU without much appreciable improvement. Finally, omalizumab was supplemented and immediately controlled her DPU symptoms 2 days after the first dose with 300 mg subcutaneous (SC) Q4-weeks. She is currently asymptomatic without any dyspareunia at 12-week follow-up and is on omalizumab (300 mg, SC, Q-8 weekly).

DPU usually occurs 4–6 h after sustained mechanical pressure to the skin. Mucosal involvement in DPU has been rarely reported.[4] Our patient never reported genitalia skin involvement or superficial pain around this area but deep pain in the vagina suggesting mucosal involvement.

Dyspareunia has been identified as a manifestation of symptomatic dermographism or factitious urticaria.[5] To the best of our knowledge, there is only a single report highlighting the association of dyspareunia with DPU in a 37-year-old man,[6] thus making this association extremely rare. This patient reported painful swelling of his genitalia especially involving the skin overlying the pubis. Our patient, did not have any skin involvement of the area, but had deep pain suggesting mucosal involvement. Response to omalizumab enhances this hypothesis, as well.

After associating this symptom with DPU, we contacted 14 female patients aged 18–59 years old, that had been diagnosed with DPU in our department to recall if they ever experienced symptoms like that. Interestingly, two of them admitted having rarely mild symptoms after sexual intercourse. We cannot exclude concealment of admitting such symptoms due to privacy concerns or embarrassment.

Few patients with CSU report premenstrual deterioration or exacerbation of urticaria symptoms and signs.[7,8] In our patient, dyspareunia occurred 5–7 days before menstruation in a menstrual cycle of 28 days. Progesterone-induced urticaria has been suggested as a potential mechanism for this phenomenon.[9] However, disappearance of dyspareunia in response to omalizumab administration suggests in favour of hormonally-induced changes in the immune function that can be blocked with anti-IgE treatment.

This case has been reported to generate awareness about this symptom that is expected to affect the quality of life of DPU patients. Only speculations can be made about the true prevalence of dyspareunia in DPU patients, while it cannot be excluded that men are affected as well. These authors recommend proactive questioning about dyspareunia while evaluating DPU patients as they may be reluctance to report this embarrassing symptom.

References

1 Lawlor F, Black AK. Delayed pressure urticaria. *Immunol Allergy Clin North Am* 2004; 24: 247–58. doi:10.1016/j.iac.2004.01.006

2 O'Donnell BF, Lawlor F, Simpson J, Morgan M, Greaves MW. The impact of chronic urticaria on the quality of life. *Br J Dermatol* 1997; 136: 197–201.

3 Maurer M, Fluhr JW, Khan DA. How to approach chronic inducible urticaria. *J Allergy Clin Immunol Pract* 2018; 6: 1119–30.

4 Czecior E, Grzanka A, Kurak J, Misiolek M, Kasperska-Zajac A. Late dysphagia and dyspnea as complications of esophagogastroduodenoscopy in delayed pressure urticaria: case report. *Dysphagia* 2012; 27: 148–50. doi:10.1007/s00455-011-9348-y

5 Lambiris A, Greaves MW. Dyspareunia and vulvodynia are probably common manifestations of factitious urticaria. *Br J Dermatol* 1997; 136: 140–1. doi:10.1111/j.1365-2133.1997.tb08773.x

6 McFadden JP, Newton JA, Greaves MW. Dyspareunia as a complication of delayed pressure urticaria. *Br J Sexual Med* 1998; 15: 61.

7 Bernstein IL, Bernstein DI, Lummus ZL, Bernstein JA. A case of progesterone-induced anaphylaxis, cyclic urticaria/angioedema, and autoimmune dermatitis. *J Womens Health* 2011; 20: 643–8. doi:10.1089/jwh.2010.2468

8 Wingate-Saul L, Rymer J, Greaves MW. Chronic urticaria due to autoreactivity to progesterone. *Clin Exp Dermatol* 2015; 40: 644–6. doi:10.1111/ced.12632

9 Wilkinson SM, Beck MH, Kingston TP. Progesterone-induced urticaria–need it be autoimmune? *Br J Dermatol* 1995; 133: 792–4. doi:10.1111/j.1365-2133.1995.tb02759.x

Data availability. The data that support this report will be shared upon reasonable request to the corresponding author.

Conflicts of interest. The authors have no conflicts of interest.

Declaration of funding. There are no funding sources in this work.

Author affiliations

[A]Department of Allergy and Clinical Immunology, 424 General Military Training Hospital, Thessaloniki, Greece.

[B]Department of Dermatology, College of Medicine and Sagore Dutta Hospital, Kolkata, West Bengal, India.