

Table 1. Clinical cases of immunoglobulin E-mediated allergy to povidone-iodine since 1998*

Reference	F/M (age)	Site (onset delay)	Clinical features [‡]	Skin testing	Tryptase
Lopez Saez and colleagues (1998) ¹	M (27)	Skin wound (Immediately)	Pruritus of the soles, generalised urticaria, facial angioedema (Grade I)	(i) PT (10 ⁻²) PVP-I: Pos (ii) PT (neat) PVP: Pos (iii) PT (neat) Lugol's solution: Neg (iv) PT (neat) 2 ICM: Neg	Not done
Adachi and colleagues (2003) ²	F (59)	Mucosa (10 min)	Pruritus in the genital area, erythema, generalised urticaria, SAP: 40 mmHg, Dyspnoea (Grade III)	(i) PT (0.1%, 10%) PVP-I: Pos (ii) PT (0.001%) PVP: Pos (iii) PT (2%) Iodine: Neg	Not done
Le Pabic and colleagues (2003) ³	M (32)	Surgical wound (a few minutes)	Clinical features not detailed (Grade IV)	(i) PT (neat) PVP-I: Pos (ii) IDT (10 ⁻⁴) PVP-I: Pos (iii) PT (neat) PVP: Pos (iv) IDT (10 ⁻⁴) PVP: Pos	(i) T ₀ +? min: 39 (N<? µg/L)
Pedrosa and colleagues (2005) ⁴	M (9)	Skin (10 min)	Urticaria, facial angioedema, dyspnoea (Grade II) One previous clinical reaction after oral intake of flubendazole (containing Povidone): (Grade IV)	(i) PT (neat) PVP-I: Pos (ii) PT (neat) PVP: Pos (iii) PT (neat) flubendazole: Pos	Not done
Caballero and colleagues (2010) ⁵	M (42)	Surgical wound (15 min)	Skin preparation with PVP-I: no event; PVP-I on surgical wound: generalised urticaria, tongue swelling, SAP: 94 mmHg, moderate bronchospasm (Grade II)	(i) PT (neat) PVP-I: Pos (ii) PT (neat) iodine: Neg	Not done
Gray and colleagues (2013) ⁶	F (12)	Skin wound (unknown)	Clinical features not detailed; one previous clinical reaction after PVP-I application on skin wound (Grade II)	(i) PT (neat) PVP-I: Pos	Not done
Castelain and colleagues (2016) ⁷	M (56)	Knee wound (immediately)	Pruritus on the knee spreading to the whole body, generalised erythema, sweating, SAP: 70 mmHg, tachycardia (Grade II)	(i) PT (neat) PVP-I: Pos (ii) PT (10 ⁻¹) PVP: Pos	(i) T ₀ +?min: 94 (ii) Baseline: 3.7 (N<11 µg/L)
Moreno-Escobosa (2017) ⁸	M (4)	Skin wound (20 min)	Eyelids angioedema, generalised urticaria, AP: 80/40 mmHg (Grade II); two subsequent clinical reactions after (i) facial application of a sun cream (Grade II) and (ii) prednisolone oral intake (Grade II); sun cream and prednisolone both contain PVP	(i) PT (10 ⁻¹) PVP-I: Pos (ii) PT (neat) sun cream: Pos (iii) PT (neat) prednisolone: Pos	Not done
Leow and colleagues (2023)	F (72)	Surgical wound (est. 15 min)	Skin preparation with PVP-I: no event; PVP-I implant pocket washout, implant soak: cardiorespiratory collapse, asystole (Grade IV)	(i) IDT Propofol: Neg (ii) IDT All perioperative drugs: Neg (iii) IDT PVP-I: Pos	(i) T ₀ +90min: 8 (N<7 µg/L)

* updated from Dewachter and colleagues (2019).⁵[‡] The modified Ring and Messmer scale has been used to classify the severity of allergic reactions.

AP = arterial pressure; Est. = estimated; F = female; ICM = iodinated contrast media; IDT = intradermal test; M = male; Neg = negative; Pos = positive; PT = prick test; PVP = povidone; PVP-I = povidone-iodine; SAP = systolic arterial pressure.

REFERENCES

- 1 Lopez Saez MP, de Barrio M, Zubeldia JM, Prieto A, Olalde S, Baeza ML. Acute IgE-mediated generalized urticaria-angioedema after topical application of povidone-iodine. *Allergol Immunopathol (Madr)*. 1998;26(1):23–6. PMid: 9585824
- 2 Adachi A, Fukunaga A, Hayashi K, Kunisada M, Horikawa T. Anaphylaxis to polyvinylpyrrolidone after vaginal application of povidone-iodine. *Contact Derm*. 2003;48(3):133–6. <https://doi.org/10.1034/j.1600-0536.2003.00050.x> PMid: 12755725
- 3 Le Pabic F, Sainte-Laudy J, Blanchard N, Moneret-Vautrin DA. First case of anaphylaxis to iodinated povidone. *Allergy*. 2003;58(8):826–7. <https://doi.org/10.1034/j.1398-9995.2003.00254.x> PMid: 12859572
- 4 Pedrosa C, Costa H, Oliveira G, Romariz J, Praca F. Anaphylaxis to povidone in a child. *Pediatr Allergy Immunol*. 2005;16(4):361–2. <https://doi.org/10.1111/j.1399-3038.2005.00272.x> PMid: 15943602
- 5 Caballero MR, Lukawska J, Dugue P. A hidden cause of perioperative anaphylaxis. *J Investig Allergol Clin Immunol*. 2010;20(4):353–4. PMid: 20815316
- 6 Gray PE, Katelaris CH, Lipson D. Recurrent anaphylaxis caused by topical povidone-iodine (Betadine). *J Paediatr Child Health*. 2013;49(6):506–7. [Https://doi.org/10.1111/jpc.12232](https://doi.org/10.1111/jpc.12232) PMid:23724819
- 7 Castelain F, Girardin P, Moumane L, Aubin F, Pelletier F. Anaphylactic reaction to povidone in a skin antiseptic. *Contact Derm*. 2016;74(1):55–6. <https://doi.org/10.1111/cod.12473> PMid: 26690279
- 8 Moreno-Escobosa MC. Anaphylactic shock due to povidone. *J Paediatr Child Health*. 2017;53(5):517. <https://doi.org/10.1111/jpc.13516> PMid: 28470810