PREVENTION AND MANAGEMENT OF PROSTAGLANDIN-ASSOCIATED PERIORBITOPATHY SYNDROME (PAPS)

Consider treatments that do not increase risk of PAPS for the following patient profiles:[1,2]

Treatment-naïve patients | **Existing PGA patients**

Step 1 – First consultation – consider PAPS when initiating PGA treatment

- Check for **patient's concerns about PAPS** *(if there are concerns, proceed to **Step 3**)*
- **Educate patients** about PAPS management if PGA is initiated*

Step 2 – Monitor PAPS actively and check patient's concerns

- **Regular follow-up appointments** to monitor for PAPS
- Provide patients with the opportunity to **raise concerns**
- Assess PAPS severity using the **SU-PAP grading system**[3,*]

Patient presents with no or mild PAPS (SU-PAP Grades 0–1)	Patient presents with moderate/severe PAPS (SU-PAP Grades 2–3)
Proactively check for PAPS concerns. If no concerns are raised, a "watch and wait" approach may be appropriate[4]	Swift and aggressive management may be required[4]

If condition deteriorates OR if patient has concerns about PAPS

Step 3 – Stop PGAs and switch to alternative management

A. PGA cessation and alternative medication

- **Switch to another class** of anti-glaucoma medication[5,*]
  - **EP2 receptor agonists** have similar IOP-lowering properties to PGAs, without FP receptor-associated changes that may lead to PAPs[6,7]
  - Partial or complete reversal of PAPs has been reported 4–6 weeks after discontinuing PGAs[6]
- If PGAs cannot be stopped, **switch to a PGA with lower likelihood of PAPS** (e.g., LAT, TAF)[2,8–10]

B. Laser treatment

- Relatively effective, non-invasive and can avoid issues with medical non-adherence[5]

C. Surgery

- Can be effective in lowering IOP where topical medications and/or laser treatment have failed[5]

Routine follow-up

***Refer to the reverse page for more information.**

1. Section 4.3 Novel Medications for Glaucoma Treatment, EP2 Receptor Agonist. Asia-Pacific Glaucoma Society. Asia Pacific Glaucoma Guidelines, 4th Edition. 2024;124–6; **2.** Section 4.4 Side Effects of Medical Therapy, Prostaglandin-Associated Periorbitopathy. Asia-Pacific Glaucoma Society. Asia Pacific Glaucoma Guidelines, 4th Edition. 2024;133–5; **3.** Tanito et al. Medicine (Baltimore) 2021;100:e26874; **4.** PAPS Compendium Expert Advisory Meeting, 23rd July, 2022; **5.** Asia-Pacific Glaucoma Society. Asia Pacific Glaucoma Guidelines, 4th Edition. 2024; **6.** Sakata et al. Semin Ophthalmol 2021;37:447–54; **7.** Aihara et al. Expert Rev Ophthalmol 2021;16:243–50; **8.** Sakata et al. Jpn J Ophthalmol 2014;58:212–7; **9.** Inoue et al. Glaucoma 2013;22:626–31; **10.** Sakata et al. Jpn J Ophthalmol 2013;57:179–84. APGS: Asia-Pacific Glaucoma Society; EP2: prostaglandin E2; FP: prostaglandin F; IOP: intraocular pressure; LAT: latanoprost; PAPS: prostaglandin-associated periorbitopathy syndrome; PGA: prostaglandin analogue; SU-PAP: Shimane University PAP; TAF; tafluprost.

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Advisory on proper eyedrop instillation technique

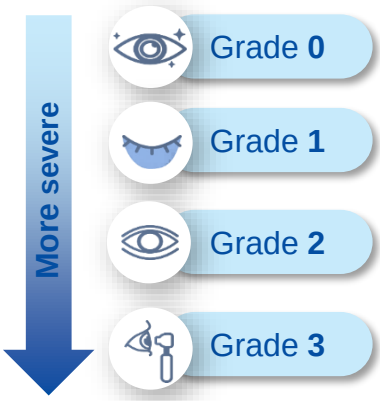
Patients are advised to carefully clean any excess eye drops from the periorbital area. Practical recommendations may include:[1]

- Washing off excess medication
- Cleaning with a wet wipe
- Using a tissue to gently absorb spilled eyedrops

Precaution

- Wiping spilled eye drops with a tissue may spread medication to the lower eyelid and contribute towards PAPS.[1,2]
- Older patients tend to administer PGAs before bed in the supine position, which could increase their risk of PAPS (e.g., patients may fall asleep without washing off excess medication).[2]

SU-PAP grading system[3]



No PAPS (no cosmetic change by macroscopic or slit-lamp observation)

Superficial cosmetic PAPS (cosmetic changes including eyelid pigmentation and/or eyelash growth)

Deep cosmetic PAPS (cosmetic changes with at least one sign of PAPS including DUES, blepharochalasis involution, periorbital fat loss or enophthalmos)

Tonometric PAPS (difficulty performing GAT and/or reduced reliability of GAT-measured IOP due to PAPS-related DUES, hardening of eyelids, ptosis or enophthalmos)

Dosing frequency and reported efficacy of various anti-glaucoma drug classes[4]

Drug class	Dosage	Efficacy (IOP reduction)
PGAs	OD	25–35%
Prostanoid EP2 receptor agonists	OD	15–35%
β-Blockers	OD–BD	20–25%
α_1-Blockers	BD	15–20%
α_2-Agonists	BD–TDS	18–25%
$\alpha_1\beta$-Blockers	BD	20%
Topical carbonic anhydrase inhibitors	BD–TDS	20%
Systemic carbonic anhydrase inhibitors	BD–QDS	30–40%
Rho-kinase inhibitors	OD–BD	20–25%
Cholinergics	TDS–QDS	20–25%

1. Inoue. Clin Ophthalmol 2014;8:903–13; **2.** PAPS Compendium Expert Advisory Meeting, 23rd July, 2022; **3.** Tanito et al. Medicine (Baltimore) 2021;100:e26874; **4.** Asia-Pacific Glaucoma Society. Asia Pacific Glaucoma Guidelines, 4th Edition. 2024. BD: twice-daily; DUES: deepening of the upper eyelid sulcus; EP2: prostaglandin E2; GAT: Goldmann applanation tonometry; IOP: intraocular pressure; OD: once-daily; PAPS: prostaglandin-associated periorbitopathy syndrome; PGA: prostaglandin analogue; QDS: four times daily; SU-PAP: Shimane University PAP; TDS: three times daily.

Developed with support from:

APGS Asia-Pacific Glaucoma Society

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