Malar Edema After Hyaluronic Acid Dermal Fillers: Expert Recommendations on Etiology, Prevention and Management

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Supplementary materials

Supplementary material 1. Literature search terms

((((hyaluron*[ALL] OR "hyaluronic acid"[ALL]) AND (filler*[ALL] OR "dermal filler"[ALL] OR "dermal fillers"[ALL] OR inject*[ALL])) AND (edema*[ALL] OR oedema*[ALL] OR swelling[ALL] OR puffiness[ALL]) AND (malar[ALL] OR midface[ALL] OR infraorbital[ALL] OR periorbital[ALL] OR orbital[ALL] OR palpebromalar[ALL] OR "lower eyelid"[ALL] OR eye[ALL]))) AND (english[la])) AND (hasabstract) NOT animals[MH:noexp] AND (2020/01/01[PDat] : 2025/06/05[PDat])

Supplementary material 2. Patient pre-treatment questionnaire

Acute skin infections

Has the patient been diagnosed with…	
A bacterial skin infection (e.g. impetigo)?	Yes ☐ No ☐
A viral skin infection (e.g. herpes simplex, viral warts)?	Yes ☐ No ☐
A fungal skin infection (e.g. Malassezia)?	Yes ☐ No ☐

If patient answered yes to any questions, please give details:

……

Active localized infections

Does the patient currently have/ Has the patient recently had…	
An ear, nose or throat infection?	Yes ☐ No ☐
A dental abscess?	Yes ☐ No ☐
Active periodontitis?	Yes ☐ No ☐
Other localised infections on the face and mucosa?	Yes ☐ No ☐

If patient answered yes to any questions, please give details:

……

Inflammatory conditions of the skin

Has the patient been diagnosed with…

Acne vulgaris?	Yes ☐ No ☐
Acne rosacea?	Yes ☐ No ☐
Seborrheic dermatitis?	Yes ☐ No ☐

If patient answered yes to any questions, please give details:

……

Autoimmune disease

Has the patient been diagnosed with…

Active thyroid disease (e.g. Hashimoto's disease, Graves-Basedow disease)?	Yes ☐ No ☐
Systemic lupus erythematosus (SLE)?	Yes ☐ No ☐
Dermatomyositis?	Yes ☐ No ☐
Rheumatoid arthritis?	Yes ☐ No ☐

If patient answered yes to any questions, please give details:

……

Allergy/hypersensitivity

Does the patient have…

A Hymenoptera venom allergy (e.g. bee or wasp stings)?	Yes ☐ No ☐
Hypersensitivity to filler components (including lidocaine)?	Yes ☐ No ☐

Chronic urticaria?	Yes ☐ No ☐
Quincke’s edema?	Yes ☐ No ☐
If patient answered yes to any questions, please give details: ……	

Chronic conditions

Has the patient been diagnosed with…

A cardiac disease?	Yes ☐ No ☐
A renal disease?	Yes ☐ No ☐
A sleep disorder?	Yes ☐ No ☐

Previous filler

Has the patient ever had any of the following fillers…

Hyaluronic acid?	Yes ☐ No ☐
Silicone?	Yes ☐ No ☐
Polyacrylamide?	Yes ☐ No ☐
Other?	Yes ☐ No ☐
If patient answered yes to any questions, please give details: ……	

Previous biostimulators

Has the patient ever had any of the following biostimulators…

Polylactic acid?	Yes ☐ No ☐
Calcium hydroxyapatite?	Yes ☐ No ☐
Polycaprolactone?	Yes ☐ No ☐
Polynucleotides?	Yes ☐ No ☐
Collagen?	Yes ☐ No ☐
PDO Threads?	Yes ☐ No ☐

If patient answered yes to any questions, please give details:

……

Treatments and medication

Has the patient ever taken/received…

Vaccination (in the 4 weeks prior to procedure)?	Yes ☐ No ☐
Hormonal contraceptive methods?	Yes ☐ No ☐
Hormone replacement therapy?	Yes ☐ No ☐
Blood thinners (e.g. warfarin, aspirin)?	Yes ☐ No ☐
Cancer treatment (e.g. chemotherapy, radiation therapy)?	Yes ☐ No ☐
Immunosuppressants?	Yes ☐ No ☐

Immunotherapy?	Yes ☐ No ☐
Dietary supplements (in the 2 weeks prior to procedure)?	Yes ☐ No ☐
If patient answered yes to any questions, please give details: ……	

Other

Has the patient ever had…	
A hematologic disorder (e.g. hemophilia, thalassemia)?	Yes ☐ No ☐
Malar edema?	Yes ☐ No ☐
A predisposition to keloid or hypertrophic scars?	Yes ☐ No ☐
Surgical procedures in the face area?	Yes ☐ No ☐
A dental procedure (in the 2 weeks prior to procedure)?	Yes ☐ No ☐
If patient answered yes to any questions, please give details: ……	
Does the patient have any other medical histories that the injector should be aware of?	Yes ☐ No ☐
If patient answered yes, please give details: ……	

Post-treatment recommendations

Is the patient aware that it is recommended to avoid the following for two weeks following the procedure? Yes ☐ No ☐

- Intensive physical exercise
- Sunbathing
- Sauna use
- Tanning bed use
- Face massage
- Dental procedures
- Cosmetic procedures
- Surgical procedures
- Laser treatment
- Radiofrequency
- Ultrasound facial therapy