ported before in the literature. We believe that amyloidoma might have been presented as a complication of Sjögren syndrome in this patient. Although local resection is curative for amyloidoma, patients must be evaluated for systemic involvement of amylodosis.

REFERENCES

- 1. Bauer WH, Kuzma JF. Solitary tumors of atypical amyloid (paramyloid). Am J Clin Pathol 1949;19:1097-1112.
- 2. Reitboeck JG, Feldmann R, Loader D, Breier F, Steiner A.

- Primary cutaneous amyloidoma: a case report. Case Rep Dermatol 2014;6:264-267.
- 3. Biewend ML, Menke DM, Calamia KT. The spectrum of localized amyloidosis: a case series of 20 patients and review of the literature. Amyloid 2006;13:135-142.
- Banno S, Matsumoto Y, Hayami Y, Sugiura Y, Yoshinouchi T, Ueda R. Pulmonary AL amyloidosis in a patient with primary Sjögren syndrome. Mod Rheumatol 2002;12:84-88.
- Mlika M, Ayadi-Kaddour A, Marghli A, Ridène I, Maalej S, El Mezni F. A rare pulmonary lesion association. Rev Pneumol Clin 2012;68:303-306.

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A Case of the Migration of Hyaluronic Acid Filler from Nose to Forehead Occurring as Two Sequential Soft Lumps

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Dear Editor:

Hyaluronic acid (HA) fillers have been widely used for soft-tissue augmentation. Because of HA's biocompatibility and biodegradability, adverse reactions are minimal. However, HA-related complications, such as delayed foreign body granulomas, delayed hypersensitivity, and necrosis have been reported^{1,2}. We herein present a case of 2 sequential soft facial lumps after injection of a HA filler. A 33-year-old woman presented with a bean-sized, flesh-colored, soft, movable, subcutaneous mass on her fore-head that had been present for 3 months (Fig. 1A). Sixteen months ago, she had been injected with a HA filler (YVOIRE®; LG Life Sciences, Seoul, Korea) on her nose at a private clinic. She had not undergone any filler injection

on the forehead. Clinically, the patient was assessed to have an angioma or lipoma and underwent surgical excision of the mass after injection of a local anesthetic agent. Histopathological examination showed the presence of irregular, amorphous, light grayish to bluish material that separated from dispersed collagen bundles with sparse inflammatory cell infiltration in the lower dermis and subcutaneous fat (Fig. 1B, C). The amorphous material stained blue with Alcian blue, pH 2.5 (Fig. 1D). These findings were considered to be consistent with HA. Two weeks after the excision, another, bean-sized, flesh-colored, soft, movable subcutaneous mass was found on the patient's glabella. Surgical removal was also performed, and histologic findings were the same as for the previous

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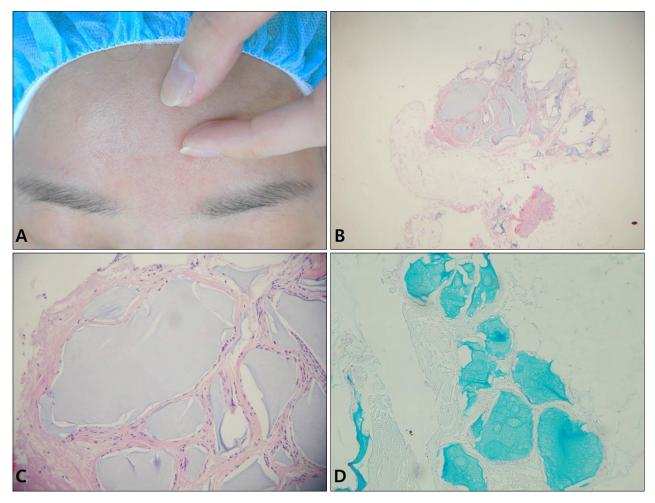


Fig. 1. (A) A bean-sized, flesh-colored, soft, movable subcutaneous mass on the forehead. (B, C) Irregular, amorphous, light grayish to bluish material, surrounded by fibrotic tissue, with sparse inflammatory cell infiltration in the lower dermis and subcutaneous fat (H&E, B: \times 40, C: \times 200). (D) Irregular material stained blue (Alcian blue at pH 2.5, \times 200).

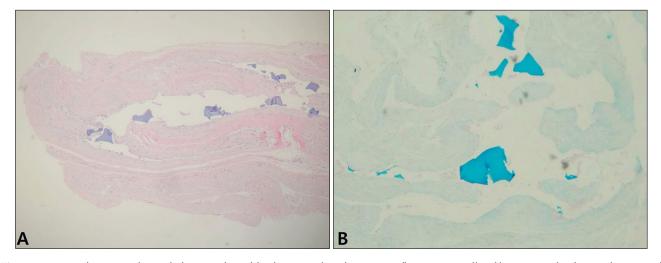


Fig. 2. (A) Irregular, amorphous, light grayish to bluish material with sparse inflammatory cell infiltration in the lower dermis and subcutaneous fat (H&E, $\times40$). (B) Irregular material stained blue (Alcian blue at pH 2.5, $\times100$).

biopsy (Fig. 2). At 5 months after treatment by surgical excision, the masses had not recurred.

Foreign body reactions due to HA fillers can occur months or even years after injection. Therefore, a delayed foreign body reaction due to a HA filler is not easy to diagnose. Furthermore, a non-inflammatory, soft, subcutaneous lump distant from the filler injection site would not be considered a HA filler-related problem^{3,4}. Our patient had 2 sequential, bean-sized, flesh-colored, soft, subcutaneous masses on her face—one on the forehead and one on the glabella-after injection of a HA filler on the nose. She had not undergone filler injection on her forehead and glabella. This phenomenon can be explained by migration of the filler, which refers to the presence of filler at a location remote from the primary injection site. Filler migration can occur by several mechanisms, including poor injection technique (high-volume, high-pressure injection), massage, muscle activity, gravity, antigravity, pressure-induced displacement, lymphatic spread, and intravascular injection⁴. According to a previous report, low-volume and low-pressure filler injections and more than 1 treatment session are recommended to minimize filler migration⁵. Additionally, some authors suggest that patients with filler injections limit physical activity and keep the face at rest for the immediate time period after filler injection⁴. We report a rare case of 2 sequential facial lumps related to the migration of injected filler. Dermatologists should be aware that dermal fillers, including HA fillers, can migrate to locations distant from the original injection sites.

REFERENCES

- 1. Kim JH, Choi JS, Yun JH, Kang HK, Baek JO, Roh JY, et al. Foreign body reaction to injectable hyaluronic acid: late granuloma formation. Ann Dermatol 2015;27:224-225.
- Park TH, Seo SW, Kim JK, Chang CH. Clinical experience with hyaluronic acid-filler complications. J Plast Reconstr Aesthet Surg 2011;64:892-896.
- 3. Nathoo NA, Rasmussen S, Dolman PJ, Rossman DW. Periocular mass lesions secondary to dermatologic fillers: report of 3 cases. Can J Ophthalmol 2014;49:468-472.
- 4. Jordan DR, Stoica B. Filler migration: a number of mechanisms to consider. Ophthal Plast Reconstr Surg 2015;31:257-262.
- 5. Beer KR. Radiesse nodule of the lips from a distant injection site: report of a case and consideration of etiology and management. J Drugs Dermatol 2007;6:846-847.

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Recurrence of Nevus of Ota after Successful Laser Treatment: Possible Role of Dermal Stem Cells

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Dear Editor:

Nevus of Ota is a fairly common hyperpigmentary disorder in Asians and usually appears at birth or in childhood. It is successfully treated by using Q-switched lasers. Several retrospective studies described the recurrence rate after treatment is extremely low as $0.8\% \sim 2.1\%^{1,2}$. Recur-

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