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Successful hyaluronic acid filler injection in a chronic myeloid leukemia patient taking imatinib mesylate

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ABSTRACT

Dermal fillers are highly favored around the globe as minimally invasive or nonsurgical procedures. Imatinib mesylate is the first-line treatment for patients diagnosed with chronic myeloid leukemia. However, some studies describe that imatinib mesylate may increase the tendency of skin fragility which can lead to easy bruising and hyperpigmentation after invasive skin procedures. Yet, to our knowledge, no studies have described any successful dermal filler injection performed on patients who are under imatinib mesylate treatment. Hence, we present a case successfully treated with hyaluronic acid filler injection on a patient under imatinib mesylate treatment. We carefully propose that hyaluronic acid filler can be an effective means of rejuvenation and cosmetic enhancement for those under imatinib mesylate treatment.

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KEYWORDS
Chronic myeloid leukemia; filler; hyaluronic acid; imatinib mesylate

Dermal fillers are highly favored around the globe as minimally invasive or nonsurgical procedures (1,2). Among diverse dermatological fillers, hyaluronic acid (HA) is preferred for its confirmed safety and efficacy (1). Imatinib mesylate (STI 571; Gleevec; Novartis Pharmaceuticals, Basel, Switzerland) is the first-line treatment for patients diagnosed with chronic myeloid leukemia (CML). However, some studies describe that imatinib mesylate may increase the tendency of skin fragility which can lead to easy bruising and hyperpigmentation after invasive skin procedures (3). Yet, to our knowledge, no studies have described any successful dermal filler injection performed on patients who are under imatinib mesylate treatment.

A 43-year-old female patient complained of her flat nasal bridge (Figure 1) and deep nasolabial folds (NLF). She was diagnosed with CML in the year of 2003 and had been treated with imatinib mesylate since May 2003 (maintained oral dosage of 400 mg/day since March 2005). She denied taking any other mediacation. Prior to HA filler injection, the patient was warned of potential side effects including bruising, edema, skin discoloration, infection, nodular masses, and vascular compromise (4). We injected 0.6 cc of HA (Restylane; Q-Med, Uppsala, Sweden) on the dorsum of her nose into the periosteal plane and 0.7 cc into the dermal-subcutaneous plane for each of her NLF. The linear threading technique was adopted for her nose and the fanning technique for her NLF. The procedure ended without any acute complications. The patient was evaluated at day 0 (the day of procedure; before the treatment), then 1 and 10 weeks after the treatment. Clinical photographs were taken upon every

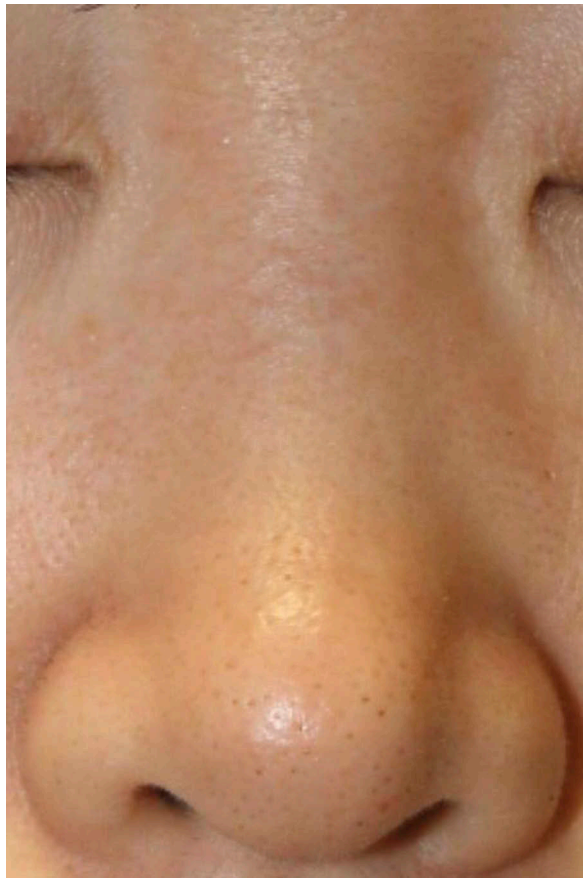

Figure 1. Before hyaluronic acid filler injection on the dorsum of the nose.

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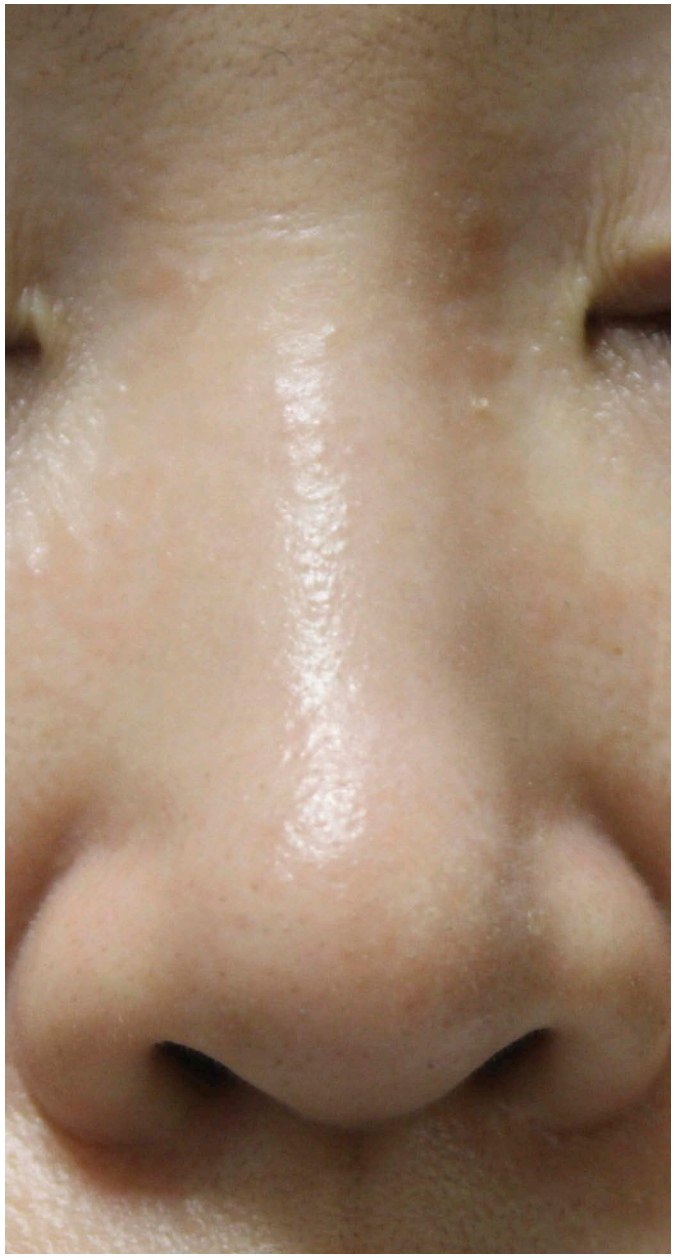

Figure 2. Ten weeks after hyaluronic acid filler injection. Note the elevated dorsum of the nose, giving more straightened dorsal nasal contours. No local adverse effect such as erythema and bruise could be seen after the treatment.

follow-up visit, and the progress of each NLF was assessed by using the Wrinkle Severity Rating Scale (WSRS) (5). The patient subjectively evaluated the degree of improvement via the Global Aesthetic Improvement Scale (4 = very much improved, 3 = Much improved, 2 = Improved, 1 = No change, 0 = Worse). Both NLFs were corrected successfully, scoring 3 (before treatment), 2 (week 1), 2 (week10) in WSRS, and 4 (week 1), 4 (week 10) in Global Aesthetic Imprvement Scale (GAIS). The height of her dorsal nose was elevated, giving more straightened dorsal nasal contours (Figure 2). Upon her follow-up visit, the patient did not declare of adverse reactions and none could be observed by the clinician.

Imatinib mesylate stands as the key treatment for patients suffering from CML. It is a tyrosine kinase inhibitor that suppresses the action of protein encoded by the ABR/BCL translocation abnormality found in CML (6). According to many reports, however, imatinib mesylate can induce various adverse events including cutaneous problems such as superficial edema, pigmentary changes, lichenoid reaction, and increased skin fragility (3,7). The mechanism under these events still has not been established and there exists no known factors or markers to identify those at risk (7). Since its first approval in 1982, dermal fillers rapidly grew in the aesthetic market. Among those, HA is considered an excellent dermal filling preparation and popularly used (8). HA is considered an ideal filling agent for its biocompatibility, biodegradability, nonimmunogenicity, increased durability, and less side effects (1,5). In the era of an expanding filler market, the demand of those who have underlying traits that effect skin integrity, such as the imatinib-taking patient in our case, should be taken into consideration.

Although it is only a limited case and further study is needed, our report is meaningful in that this is the first demonstration of successful dermal filler injection on a CML patient under imatinib mesylate treatment. We carefully propose that HA filler can be an effective means of rejuvenation and cosmetic enhancement for those under imatinib mesylate treatment.

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Conflict of interest

None declared.

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