This case report describes a young patient who presented at the clinic with an aesthetic problem following the placement of an implant 18 months earlier. Her medical history revealed no particular pathology. She was a smoker (five cigarettes a day). Clinical examination revealed the presence of localised gingival recession at the labial surface of the left central incisor, associated with an almost complete absence of attached gingiva. The presence of a veneered prosthetic abutment and a fracture of the enamel edge were also noted. The patient wished to significantly improve the aesthetic appearance.

Her dental history revealed that a root fracture had been diagnosed following the removal of an existing crown. An immediate implant was placed without the use of GBR. The patient reported that the gingival displacement began during the final crown fitting. No temporary crown had been placed beforehand.

There were several factors behind this aesthetic failure. The first was the choice of surgical technique. Immediate implant placement in patients with a thin morphotype and thin buccal bone plate is known to carry high aesthetic risks. At the time of examination it was noted that the patient had both a thin gingival morphotype and a thin buccal bone plate at the contralateral central incisor. It can be assumed that the situation was the same for the extracted tooth.

The thickness of the buccal bone plate directly influences the amount of bone resorption associated with the extraction. Additionally, a root fracture (the reason for the extraction) is likely to cause a loss of integrity of the buccal bone plate. Finally, the decision to place an immediate implant without bone regeneration is another surgical choice that contributed to the unsatisfactory result. Studies have shown that extractions naturally induce bone resorption, especially if the buccal bone plate is thin. The use of a filling material can limit bone remodelling and thus help achieve a good aesthetic result.

Further factors contributing to the patient's clinical situation included the 3D implant positioning and the type of implant chosen. Radiological examination clearly showed a buccal implant position which was incompatible with maintaining the buccal bone plate. The vestibular position of the implant meant that there was no bone on its entire facial surface. There was a clear failure to provide sufficient distance to maintain the buccal bone plate. Choosing an implant of appropriate length was also critical. It needed to be long enough to allow proper bone anchorage, but required careful placement to achieve appropriate palatal orientation. This was made more difficult because of the natural concavity of the vestibular bone.

The combination of immediate placement and poor implant positioning led to an unacceptable aesthetic result for this young patient. This outcome then leads to consideration of how the situation could be improved. The first question is whether the implant should be preserved and a tissue graft attempted. Because of the lack of keratinised gingiva, a simple connective tissue graft would not be sufficient, even if it increased in the thickness of soft tissue. Additionally, attempting a connective tissue graft in this location could be problematic because of the high risk of graft necrosis in the exposed part, leading to an even more unfavourable aesthetic result.

A better choice would be to remove the implant, and to do this as far as possible without raising a flap, in order to minimise surgical trauma. As in the case of an extraction, a healing period of 6 to 8 weeks would be required to obtain complete closure and soft tissue maturation. A CT scan would then be performed to assess the possibility of placing a new implant that was optimally positioned. Bone regeneration would be considered alongside the implant placement, with or without a connective tissue graft, depending on the clinical situation. A healing period of four months would be required before performing the second-stage surgery. After this, a screw-retained temporary crown would be fitted to ensure the maturation of different gingival volumes. Finally, anatomical impressions would need to be taken to obtain an emergence profile that was consistent with that of the temporary crown.

Immediate implant placement is an attractive technique for the practitioner as it can yield quick aesthetic results. However, as attractive as it seems, it is a very risky technique if the only parameter taken into account is speed, and the high risks of aesthetic failures are ignored. It is therefore essential to have a good overview of all the parameters that will be involved in achieving an aesthetic result, particularly in the aesthetic zone. Using a comprehensive checklist prior to surgery would be one way of objectively evaluating the feasibility of the treatment approach and the predictability of the aesthetic result achieved.