

## INTRODUCTION

A fundamental objective of an aesthetic treatment is the patient's satisfaction and that the outcome of the treatment should meet the patient's expectation of enhancing his/her facial aesthetics and smile. A patient constantly doubting the end result of the treatment, which is an irreversible procedure, can be motivated and educated through Digital Smile Design (DSD) technique. The digital information serves as a starting point for a wax-up and an intraoral mock-up, which is widely reported in literature as an objective and efficient communication tool among dentist, patient, and technician. This case report of a maxillary anterior rehabilitation demonstrates aesthetic planning with the Digital Smile Design (DSD) system and a direct mock-up technique.

## METHODS & MATERIAL

DSD is a technical tool which is used to design and modify the smile of patients digitally and help them to visualize it beforehand by creating and presenting a digital mockup of their new smile design before the treatment physically starts. The mock-up technique is an efficient tool in treatment planning communication, used to confirm the treatment plan before starting preparations and to evaluate final restorations within the limitations of biological and functional considerations. The mock-up is also a clinical confirmation of the digital tool. After preoperative photographs were obtained, digital planning was created using DSD. However, due to differences in virtual simulation, a direct mock-up with composite resin was performed.

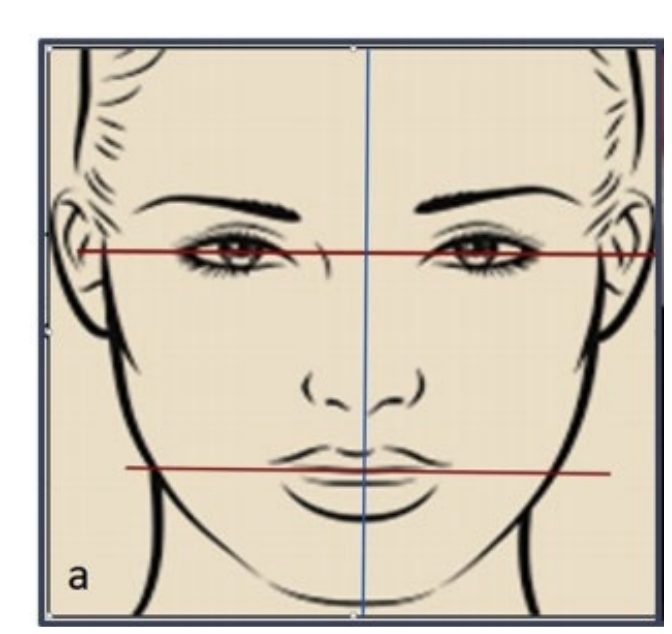
## CASE PRESENTATION

A 32-year-old female patient who was unhappy with her smile presented with diastema and absence of the right lateral maxillary incisor. Her main wish was to improve the aesthetic appearance of her maxillary incisors.

The following photographic views in fixed head position are necessary:

### \*Frontal views:

Facial photograph to be placed behind crossing lines, for initial digital smile design planning



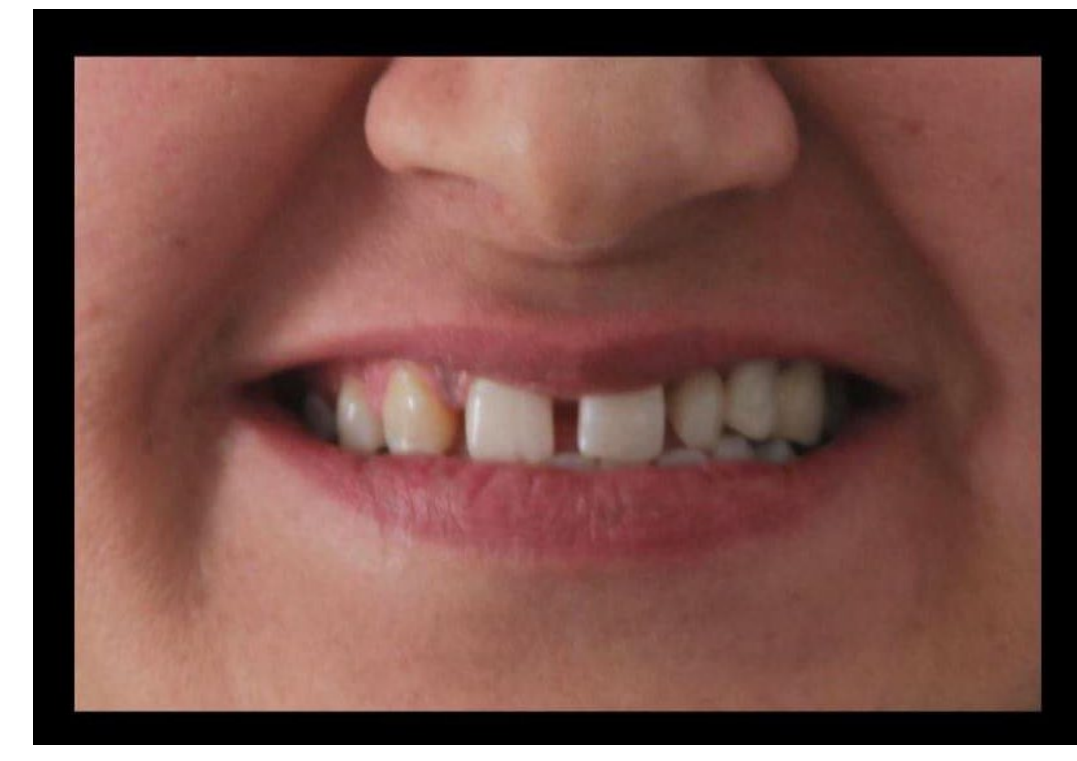
-Full face with a wide smile and the teeth apart



Retracted view of the full maxillary and mandibular arch with teeth apart



Wide smile view

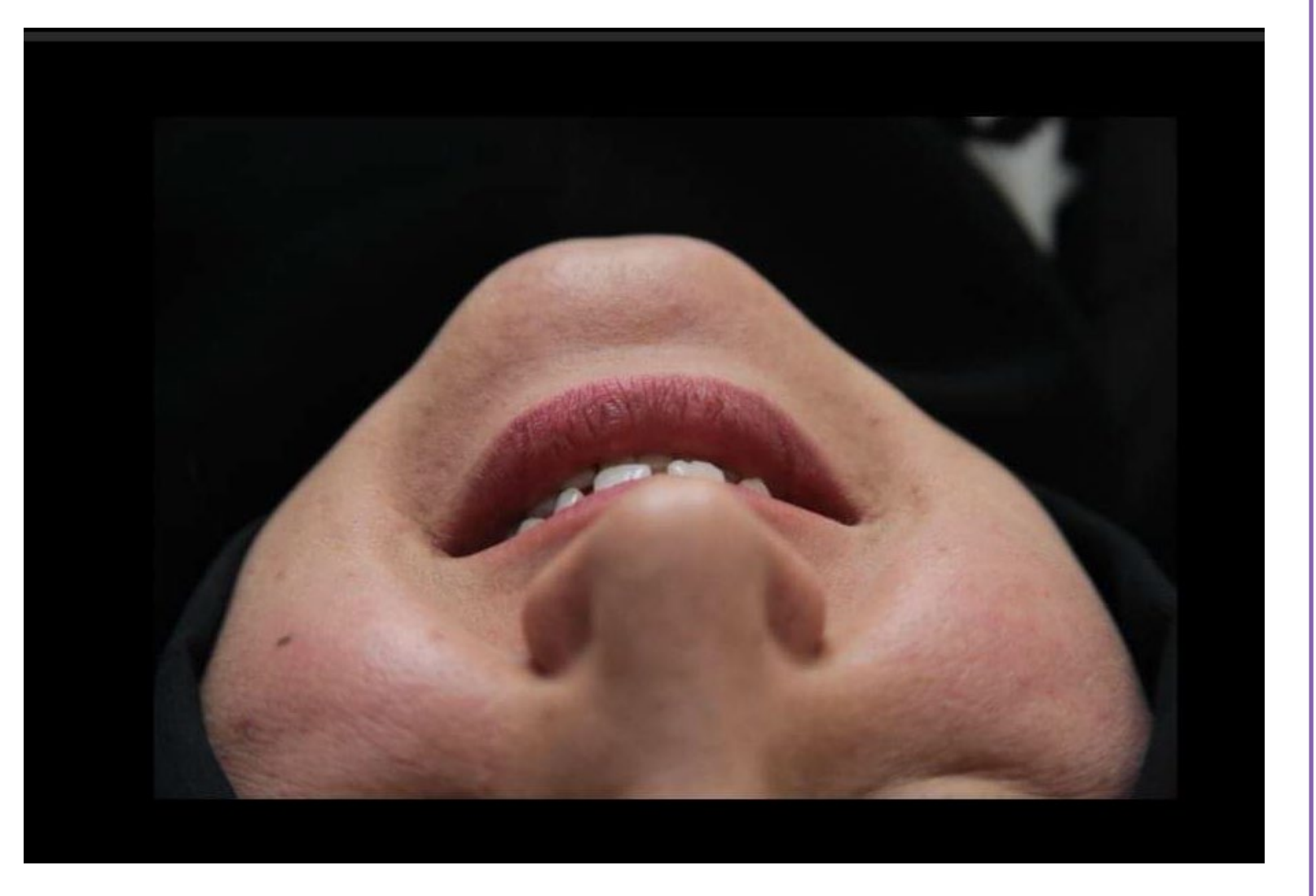


### \*Profile views:

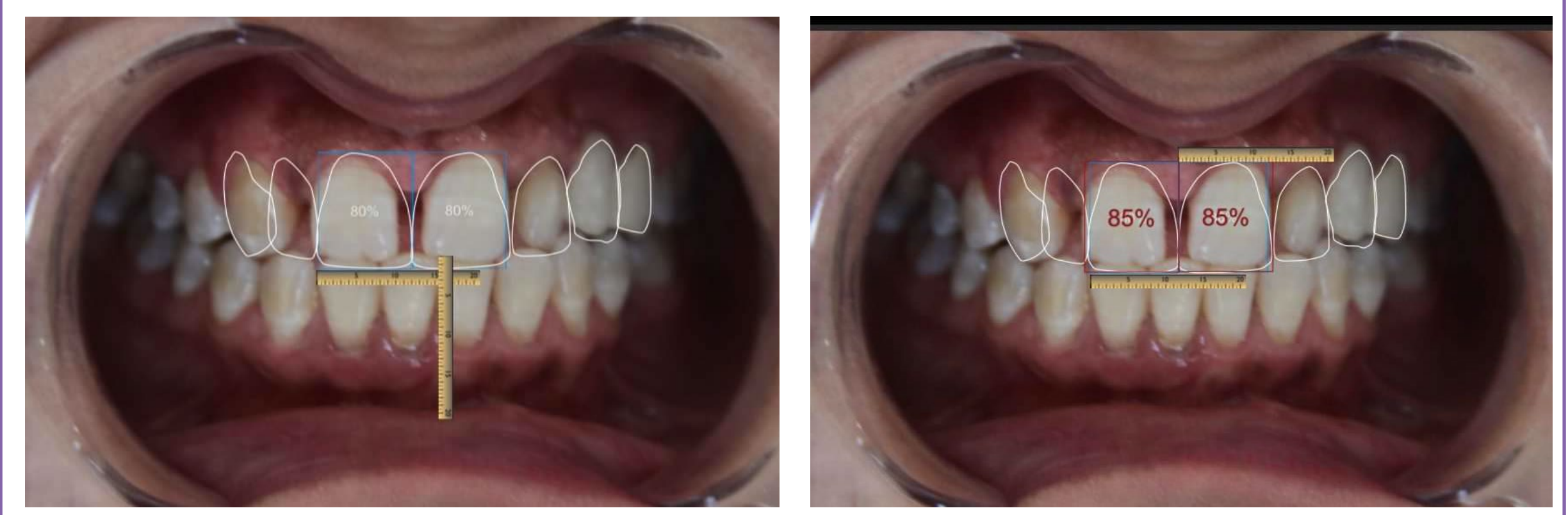
-Side Profile with a full Smile



\*A 12 O'clock view with a wide smile and incisal edge of maxillary teeth visible and resting on lower lip



\*Virtual simulation with digital smile design:



\*Alteration of the planning proposed initially by the digital smile design:



## RESULTS

Thanks to 3D-printer technology, a reliable and stable model can be made that helps the clinician to present the smile design to the patient through the mock-up.



Seeing is believing – the power of the visual impact. Thanks to a silicone transfer index it is easy to transfer the digital design into the patient's mouth.



## CONCLUSION

Digital smile design concept is a helpful tool in aesthetic visualization of patient's problem. It not only helps patients to envision their treatment outcome but also improves clinician's diagnosis and treatment planning. DSD leads to customization of smile design by increasing the participation of patient in their own smile design which result in a more aesthetically driven, humanistic, emotional and confident smile. The patient may evaluate, provide opinion, and approve the final shape of the new smile before any treatment procedures are performed thus enhancing patients satisfaction, and this can also have important medico-legal functions.