# Guided bone regeneration in implant purpose in cosmetic area

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## BACKGROUND

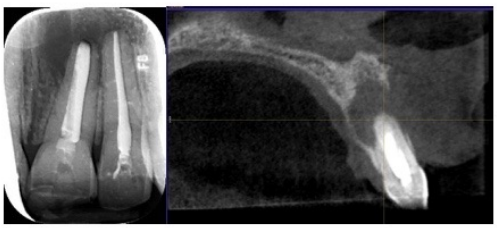
Guided Bone Regeneration (GBR) is a surgical technique that is used in the treatment of large
bone defects and is based on the use of membrane barriers to direct the growth of new bone to
sites with insufficient volume in order to restore Aesthetics or to allow the placement of dental
implants. With tissue engineering it is possible to completely or partially replace damaged
fabrics with neoformed fabrics, designed and constructed for the specific purpose. Bone tissue has
the ability to regenerate spontaneously defects<2 mm, in this case we are talking about repair
regeneration, in defects> 2 mm we need to use exogenous strains to promote regeneration (GBR).

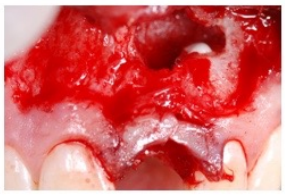
## CASE PRESENTATION

A male patient aged 23 years was present at our clinical Hospital for the presence of fistula with
purulent material secretion under 2.1 which was already treated endodontically; The patient also reported that he had undergone a further apicectomy surgery, which was always on the same
side.From the X-ray examination with orthopanoramic and successive Cone Beam, there is an
extensive cystic lesion at the above mentioned element with significant radicular re-absorption,
with the involvement of element 2.2 also already endodontically treated 1-2 Considering the
extension of the lesion, and considering the failure of the previous apicetomy we opted for the
avulsion of element 2.1 with removal of cystic lesion, concomitant regeneration and subsequent
implant therapy, it was also decided to perform the apicetomy of the present 2.2.

## CONCLUSIONS

The case presented shows how using regenerative techniques prevents the collapse of hard and
soft tissues, which occurs as a physiological bone remodeling process following avulsion of dental
elements, particularly in a highly valued aesthetic region.
The purpose of biomaterials is to fill the gap of bone defect,
Create a suitable environment for bone reformation, stimulate bone reformation, keep the original
volume of graft as much as possible.





## BIBLIOGRAPHY

1.Dahlin C, Linde A, Gottlow J, Nymans :Healing of bone defects by guided tissue regeneration.Plast Reconstr Surg 1988;81:672-676
2. Dahlin C, GottlowJ, linde A, Nyman S. Healing of maxillary and mndibular bone defects using a membrane technique .An experimental study in monkeys. Stand J Plast Reconstr Surg 1990, 24:13-19
3. Melcher AH, Dreyer CY. Protection of the blood clot in healing circumscribed bone defects J Bone Joint Surg 1962; 44B:424-430.
4. Nevins M, Mellonig JT The advantages of localized ridge augmentation prior to implant placement: a staged event Int JPeriodont Rest Dent 1994; 14:97-111
5. Parma Benfenati S, Tinti C, Albreksson T, Johansson C. Histologic evaluation of guided vertical ridge augmentation arounf implants in humans Int J Periododntics Restorative Dent 1999;19:425-437