

Applications of growth factors in implant dentistry; techniques and applications

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Introduction: Autologous membrane and autologous fibrin glue/ i-PRF are the excellent sources of growth factors derived from blood. It supports the graft material and helps in regeneration along with its anti-inflammatory and pain killing effect during repair (TNF-a). Growth factors are derived from platelets. Platelets play role in transmission of the signals and release of the GFs (the most important are the PDGF-BB, TGF13-1and IGF-1). Any osseous/soft tissue defects like extraction socket, ridge augmentation (horizontal or vertical), and maxillary sinus augmentation can be done using growth factors from autologous membrane/fibrin gel block.

Objective: To make implant surgery simple, minimally invasive, with less post-operative pain and more predictable results.

Discussion: With every implant surgery planning, the doctor has to plan bone augmentation according to the size of the defect either it is vertical or horizontal or both. The success of the graft depends upon the soft tissue approximation to


keep the graft intact. Sticky bone technique helps retain the graft intact and then it is covered with autologous membrane to avoid complications. Such applications of the growth factors make surgeons and patients life easier with less post-operative complications and less post-operative discomfort. There are several chair side systems and procedures available which can help make autologous membrane/dense fibrin mesh blocks.

Conclusions: Growth factors enhance wound healings multi-fold and protect the grafts by inducing angiogenesis and less post-operative discomfort. It can easily be applied wherever any soft or hard tissue grafting is required either in implant surgery, socket preservation, sinus lift procedures or any oral surgery.

Speaker Biography

Hamood Ur Rehman has completed his Bachelor of Dental Surgery from Fatima Jinnah Dental College, Karachi, Pakistan in 1999. In 2013 he completed Maxi course by American Academy of Implant Dentistry, UAE. Currently he is working as an Implantologist at Bright Smile Center, Lahore, Pakistan.

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