

HEAD AND NECK CONFERENCE: THE MULTIDISCIPLINARY APPROACH

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3 D printing in medical and dental

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3D printing (3dp) is the next big milestone in health care delivery. This game changer is steadily creating in-roads into medical and allied fields. 3dp creates solutions in diagnostic and treatment procedures. The presentation is in two parts, inside out and seeing the unseen. The first section deals with models to be used for fabricating stents, guide paths, reconstructing lost parts due to surgery or trauma. These involve designing and creating lost parts, aligning to be symmetrical and restoring function of the region. The reconstruction process could be simple or may need CAD designing. Both are showcased in actual cases. The reconstructed parts are in bio-compatible 3 D printed materials like titanium. The second part involves recreating inner tissues and structural changes produced by the disease process by 3dp. The 3dp created models assist in diagnosing, revealing and making more visible the subtle changes in disease process, highlighting the possibly missed lesions, revealing effects on vital tissues close to the disease process be it major blood vessels, organs, etc. The changes seen are easily visible and understandable. Patients do not understand radiographs or laboratory results but can appreciate on these models in effect, creating evidence based informed patient. The models reveal all tissues from skin, fascia, muscles, organs and bone. The models can be used to create probable outcomes of the treatment by doing simulations. The final position of the simulation can be used to produce stents for immediate post-surgical immobilization in the new position. This gives quality assurance, predictability and precision with the help of these simulations and gets enhanced treatment outcomes in patient satisfaction.

Biography

Bharat M Mody completed his Bachelor's and Master's in Dental Science in Government Dental College and Hospital Mumbai. He worked as a principle and professor in k.m.shah. dental college Vadodara. He is presently working as a professor at Its dental college, Ghaziabad.

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