EuroSciCon
SciTechnol

6th Edition of International Conference on
Otorhinolaryngology

March 08-09, 2018
Paris, France

Zaharia Petronela et al., J Otol Rhinol Vol: 7
DOI: 10.4172/2324-8785-C1-008

# 3D RECONSTRUCTION UTILITY IN SURGICAL TREATMENT OF RHINOSINUSAL TUMORS: A CASE REPORT

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Three-dimensional printing has numerous applications and has gained much interest in the medical world. The constantly improving quality of 3D-printing applications has contributed to their increased use on patients.Nowadays,3D printing is very well integrated in the surgical practice and research. Also, the field of head and neck reconstructive surgery is constantly evolving because of the three-dimensional printing, a technology which can be widely used in a variety of situations such as reconstruction of tissue defects, surgical planning to surgical guides, medical modeling and prosthesis. By using 3D printing into tissue engineering and materials, it may be possible for otolaryngologists to implant 3D printed functional grafts into patients and will also provide a rapid production of personalized patient-specific devices. Advances in 3D printed implants and future tissue-engineered constructs will bring great progress to the field of otorhinolaryngology. Rhinosinusal tumors are a very important subject in otorhinolaryngology. Malignomas of the nasal cavity and the paranasal sinuses count for less than 3 % of the ENT-malignancies. We discuss the case of a 48 years old male patient diagnosticated with rhinosinusal carcinoma treated with radical surgery in July 2017 and now is under radiotherapy treatment. This case required a multidisciplinary surgical team: ENT, Plastic Surgery, OMFS and Ophtalmology. In our experience, this procedure was perfectly adapted to the reconstruction of the anterior wall of the left maxillar sinus and inferior orbital wall, providing easier reconstruction using titanium mesh which proved to be safe and effective. Thissignificantly reduces the operative time and improves aesthetic outcomes of postsurgical sinusal reconstruction. To conclude with, even though there are so many advantages of 3D printing, the additional expensive cost and the time needed to produce devices by current 3D technology still limit its widespread use in hospitals. There is a need for a formal cost-effectiveness analysis. However, the development of guidelines to improve the reporting of experience with 3D printing in surgery is highly desirable.

**Recent Publications**

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## Biography

Petronela Zaharia is a first year resident in the Otorhinolaryngology Department at St. Spiridon Hospital in Iasi, Romania, very passionate about this complicated field of interrelated systems. Recently participated at the IFOS ENT World Congress in Paris, where she expressed her desire to deepen her surgical skills and knowledge upon various themes. A teamworker, agile, focused and with a desire to discover innovative outcomes in this speciality. Also, a very important aspect of her every day practice is offering confidence, empathy and respect to her patients, managing to succesfully combine medical knowledge with the aforementioned personality traits.

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