



## AB256. The role of 3D model printing technology and its application in complex upper limb pathology

Conor Keady, Ciara Megan Fox, Michael O'Sullivan

Department of Trauma and Orthopaedics, Galway University Hospital, Galway, Ireland

**Background:** As technology evolves, it impacts on the capacities of surgical intervention. 3D printing technology has been used in many different surgical specialties over the last decade, particularly in the realm of prosthetics. It can be useful in aiding both pre-operative planning as well as the creation of patient-specific implants

**Methods:** We presented the case of a child with both bone forearm malunion which resulted in a loss of forearm pronation/supination. Surgical correction of the malunion

via osteotomies was performed using patient-specific 3D-printed cutting and drilling guides produced from CAT scans of the patient's forearms.

**Results:** This allowed us to restore his anatomy to as near normal as possible.

**Conclusions:** 3D printing is becoming a more accessible and less costly intervention to add to our surgical armamentarium. In cases of complex trauma, it holds the promise of improving both patient and surgeon satisfaction. However, limitations still exist including availability of this technology in an Irish-setting and manufacturing lead time. We discuss the difficulties in accessing and using this technology as well as a review of the use of 3D printing technology in complex pathology.

**Keywords:** 3D printing; malunion; osteotomy

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