**Prototipo rápido para docencia y estrategias quirúrgicas en Pediatría**

Summary:

**Introduction:** The incorporation of the clinic and the imaging allow a better understanding of anatomy. The aim of this work is to develop a rapid prototype in synthetic material that replicates anatomical details to be used in teaching and surgical training in Pediatrics. **Material and method**: presentation of case: one year old female with respiratory distress syndrome. In the endoscopic examination was found a distal tracheal compression. The angiotomography confirmed the presence of a vascular malformation. In order to discuss appropriate conduct, the making of rapid prototyping in scale 1:1 was requested to simulate an identical condition of the thoracic topography of the patient, using virtual 3D images stored in the DICOM format. **Rapid prototype technique**: code "g" was generated, which was used to control the hardware of production and a three-dimensional digital grid was obtained. Digital simulation and production in plastic (ABS) with deposition and fusion technique (MDF) was performed. The prototype was validated by comparing measurements with witnesses of the virtual model in 3 D. **Results and discussion**: the model replied exactly the defects found in the scan and endoscopy, confirming the presence of vascular malformation and its impact on the respiratory system. Rapid prototype shows the internal and external structures of the human body with maximum precision allowing a topographic view of "normal or pathological" situations that could facilitate the teaching and training of the surgical team to propose an appropriate treatment plan. There are many areas of medicine that could benefit from this model that could be built with different types of materials with different flexibility and consistency.

Conclusions: Rapid prototype gives form to virtual 3D images, allowing teaching and training of the surgical team.

Key Word: rapid prototype, teaching pediatric and anatomy