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11th International Meeting on General Thoracic Surgery



Hospital
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Sagrat Cor

10th International Workshop on Surgical Exploration of the
Mediastinum and Systematic Nodal Dissection



5th Meeting of the Thoracic Oncology, Thoracic
Surgery, Techniques & Transplant, Respiratory Nursing
and Respiratory Physiotherapy Areas of the Spanish
Society of Pneumology and Thoracic Surgery (SEPAR)



3rd Joint Meeting of the Spanish Society of
Thoracic Surgery (SECT)



30th Congress of the "Asociación Iberoamericana
de Cirugía Torácica" AIACT



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PECTUS EXCAVATUM: 3D CUSTOM-MADE IMPLANTS PROCEDURE

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Background: In the absence of demonstrable functional impairment, pectus excavatum is merely a very common congenital deformity (1/500 births), albeit with a marked psychological impact from early adolescence until advanced age. Many patients do not wish to undergo thoracic remodeling operations which are invasive and do not clearly result in respiratory or cardiac improvement.

Methods: Since 1993 to 2018, we designed 638 custom-made silicone to treat funnel chests of any type. Beginning in 2007, three-dimensional constructions were made from thin computed tomographic scans by computer-aided design. All these elastomer implants are placed in a deep sub-muscular (Pectoralis Major) upwards and sub-fascial (Rectus Abdominis) downwards position. The cutaneous approach is short vertical pre-sternal (6-9 cm) or through a previous scar (redo of Ravitch). The post-operative period is simple and not very painful.

Results: All classic types (Types 1-2-3 Chin) of asymptomatic pectus excavatum were treated have been treated for their psychologic impact.

Others types (T0 platy P. -T4 low-arcuatatum-T5 redo- T6 mixed P. -T7 Hybrid) in our classification. Results are impressive, definitive for life, and in a single operation. Complications are rare (4 hematomas, 3 infections, 1 rotation) seroma is frequent but limited by efficient dissection and post-operative contention (1 month 24/7) contention.

Conclusion: Correction of asymptomatic pectus excavatum using a computer- aided design silicone implant, fulfils aesthetic and psychologic requests. The technique is simple, reliable. It yields high quality results with only one procedure and for life

Chavoin JP, Grolleau JL, Moreno B, et al. Correction of pectus excavatum by custom-made silicone implants: Contribution of computer-aided design reconstruction. A 20-year experience and 401 cases. *Plast Reconstr Surg*. 2016;137:860e–871e.

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The Role of Computer-Aided Design Implant
Insertion in Revision Pectus Surgery; *Ann Thorac Surg* 2021;112:e387-90)