The adoption of uniportal approach in Chile: the experience of a single surgical team from Valparaíso, Chile

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Abstract: Uniportal VATS lobectomy in Chile began in 2013, in an old and small provincial hospital in Valparaíso, the main port of Chile, a few months after two thoracic surgeons had a short stay in Hospital La Coruña with the inventor of the most revolutionary technique in thoracic surgery of the last time. Four years after the first visit of Dr. González Rivas to Chile to sharing his initial experience, and after the explosive development of this technique especially in Asia, ALAT organization invited him again to our country as a main speaker in its International Congress, focused largely in uniportal lobectomy. As expected, these thoracic surgeons could operate with their teacher, and make true the dream of any thoracic surgeon who began with a new kind of surgery: perform it in their hospital with its inventor and also their friend.

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Introduction

As in the vast majority of surgical centers around the world since Dr. Gonzalez Rivas published his first experience in uniportal VATS lobectomy in 2011 (1), in Chile began an increasing interest among the different surgical groups to adopt this novel and promissory technique. In those days there were few communications of VATS lobectomy in our country, even with the three or four ports approach. The first report of VATS lobectomy in Chile was performed by Rodríguez and his group in Santiago, in 2012, with the classic multiport VATS approach (2), and that same year Velásquez from Colombia was publishing his experience in VATS lobectomy, using the new uniportal approach, but included only two cases of cancer (3), which was indeed a step forward of the Caribbean surgery compared with our experience in the south cone of America.

Our hospital is located at the shore of Chile, in the main port of our country, Valparaíso (*Figure 1*). This city has a population over 300,000 people, and our hospital is one of the oldest but still in service mayor public health center in Chile. It was born as a small TBC sanatorium with 200 beds in the middles of 1940, and now is advocated mainly to thoracic surgery and internal medicine. Nevertheless despite our vast historical background in the old classic (and extinct) anti TBC surgery performed during the previous century, we had not made the transition yet to the modern thoracic video surgery except for some minor resections and pleural procedures, and even much less through uniportal approach. We had made some advances with minimally invasive technique using three or four ports, but the uniportal VATS lobectomy seemed to be too struggled and operator dependent to us. Other thoracic units in Chile were performing their firsts VATS lobectomies in 2012, but all of them using three or four ports, and all of them in private centers in the capitol city, Santiago, with over 7 million people. There was not any public institution performing VATS lobectomies in Chile in 2012.

We were one of the most enthusiastic assistants enrolled in the symposium organized by the Thoracic Surgery Unit from Clínica Alemana in Santiago Chile, in October 2012, which was focused in minimally invasive thoracic approach including uniportal VATS and robotic surgery, which was indeed the first visit to Chile of Dr. González Rivas (*Figure 2*). We dreamed immediately that we could get the

Figure 1 Valparaíso, Chile.

Figure 2 From right to left, Dr. González Rivas, Dr. Raul Berrios (Chile), Dr. Ricardo sales do Santos (Brazil) and Dr. Raimundo Santolaya (Chile) in Clínica Alemana, Santiago Chile, October 2012.

Figure 3 From right to left, Dr. González Collao (author), Dr. González Rivas, and Dr. Jorge Avila (Chile), in Hospital La Coruña, April 2013.

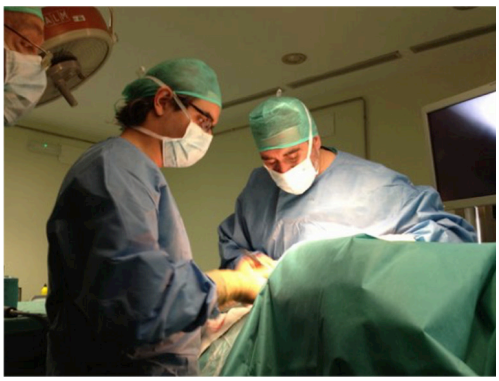

Figure 4 Dr. González Rivas and the author in O.R, in Coruña, April 2013.

less invasive technique for our patients in the public health system, and that we didn't need to give the steps of four to three to two ports previous to single port approach adoption.

Soon after we met Dr. González Rivas in his brief stay in Chile, I dared to mail him with the purpose to better know the technique, and learn all the possible aspects that could help me to apply the same procedure in my old hospital. I have never expected that Dr. González Rivas answered me that very same day inviting us to me and my colleague Dr. Jorge Avila to visit him in La Coruña. There were ten intense days since the beginning (*Figures 3*,*4*), and it was enough to make us completely fall in love with the uniportal approach. We came back to Chile with great hope and the best experience with a tremendous human group from La Coruña Thoracic Surgery Unit. We felt like at home with them, and we still remember those days like the more pleasant learning opportunity in our careers.

The technique was quickly adopted by us in a short

Figure 5 Dr. Gaetano Rocco and Dr. González Collao in La Coruña, February 2014.

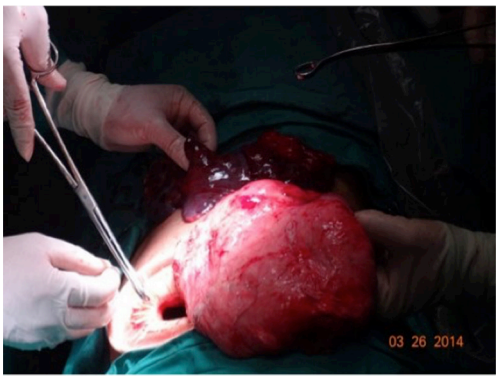

Figure 6 A 22 years old girl with CCAMF, first Uniportal Pneumonectomy.

Figure 7 Uniportal pneumonectomy in congenital cystic adenomatoid malformation (4).
Available online: http://www.asvide.com/articles/1118

time period, maybe due to our efforts to recover the lost time in minimally invasive mayor resections, so we began with uniportal approach for lung biopsies, pneumothorax, metastasectomies, thoracic duct ligation, and other minor procedures, until that 5 months later, in September 2013, we could perform our first uniportal VATS lobectomy, in a 70 years old patient with an adenocarcinoma, which was also the first lobectomy in Chile with this approach. We could soon persuade different private institutions in the city to acquire the specially designed instrumental for uniportal surgery, and polymer hemostatic clips, and we could also use a wide variety of energy devices and staplers, so we could rapidly begin to perform this surgery also in the clinics of the region. But nevertheless, mainly due to economic aspects we don't have yet Scanlan instruments in our public institution, so we still perform uniportal vats lobectomies in the hospital with classic instrumental of open surgery, which has no prevented us from accumulating the bigger experience in Chile with uniportal approach.

Next year, in February 2014, we decided to schedule to the International Symposium in uniportal VATS-Wet-lab and Live Surgery in La Coruña, and we could enjoy again with our friends, while we were getting a more formal instruction in uniportal focus, despite our initial and successful experience after our first internship. In that occasion we could meet and share great moments with others renowned professors like Dr. Gaetano Rocco, Dr. Alan Sihoe, and Dr. Anthony D'amico, among others, and we started to feel that we belong to a new kind of surgeons, inheritors of this treasure (*Figure 5*).

In March 2014, just a few weeks after the symposium, we were able to perform the first uniportal pneumonectomy in Chile, in a 22 years old girl with a congenital cystic adenomatoid malformation, and functional exclusion of the right lung. Her length of stay was only 3 days (*Figures 6*,7).

Since September 2013 our team is the only one who perform regular uniportal VATS lobectomies in Chile; nevertheless exists an increasing interest to adopt this approach among chilean thoracic surgeons, especially the new generations, and even some of them has made rotations in La Coruña like us, and others has participated in symposia, and wet-labs in Europe.

Since our first achievements in uniportal lobectomies we had established an reciprocal communication channel with our mentor, Dr. González Rivas, so each time we performed some interesting advance and achievement, like our first lobectomy post neoadjuvant therapy, or our first thymectomy, we received his congratulations and warm encouraging words.

From September 2013 we had performed 78 lobectomies, 2 pneunectomies, 5 bilobectomies, 2 non-intubated metastasectomies, and others mayor and minor procedures using exclusively uniportal approach, including the practice in our public institution and private clinics in this area in

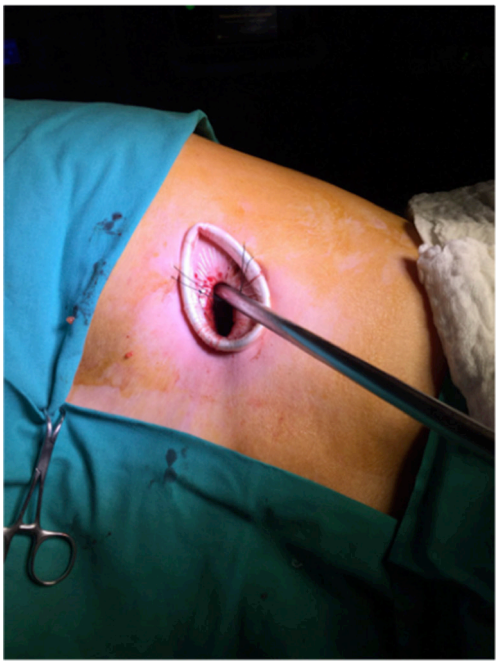

Figure 8 "Hammock" stitches with 2.0 silk in the upper edge of the uniportal incision.

Figure 9 Dr. Diego González Rivas, Dr. Jorge Avila, Dr. José Clavero and Dr. González Collao in Valparaíso, July 2016.

Chile. We are always ready to stimulate others thoracic units in our country to adopt this approach, and we are often invited to share our experience with our colleagues since then. We did not change any aspect from the original technique, but we regularly use the soft tissue expander and we added a "hammock" stitch for the camera in the upper edge of the incision for comfort and avoid fatigue. We use a 2.0 silk in a U shape stitch for this purpose (*Figure 8*).

I felt very honored when ALAT organization and Dr. José Clavero from Chile invited me to participate in the First Uniportal Master Class in our country, in July 2016, a pre-congress course in Santiago. It was the opportunity to share experiences again with Dr. González Rivas and invite him to our old hospital in Valparaíso, distant 120 km from Santiago. We performed a middle lobectomy in a 64 years old woman, with Dr. José Clavero as third surgeon (*Figure 9*).

My final thoughts are full of gratitude to all the people involved in this incredible journey: to Dr. González Rivas and his group in first place because of his constant efforts to share his knowledge and experience through publications, videos, symposium, wet-labs and different courses around the globe; to my partners in Valparaíso Hospital, specially my colleague Dr. Jorge Avila, who has become my mainstay in each surgery with his enthusiasm and desire to learn. And finally to all those patients who trusted us and put their life in our hands.

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Footnote

Conflicts of Interest: The author has no conflicts of interest to declare.

References

1. Gonzalez D, Paradela M, Garcia J, et al. Single-port video-assisted thoracoscopic lobectomy. Interactive CardioVascular and Thoracic Surgery 2011;12:514-5.
2. Rodríguez P, Undurraga F, Santolaya R, et al. Lobectomía por VATS Video-thoracoscopic lobectomy. Revista Chilena de Enfermedades Respiratorias 2012;28:23-8.
3. Velásquez M, Velásquez ME. Single port video-assisted thoracoscopic pulmonary lobectomy. Revista Colombiana de Cirugía 2012;27:270-74. Available online: http://www.scielo.org.co/scielo.php?script=sci_arttext&pid=S2011-75822012000400005
4. González Collao C. Uniportal pneumonectomy in congenital cystic adenomatoid malformation. Asvide 2016;3:349. Available online: http://www.asvide.com/articles/1118

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