



Editorial / Editoryal

## Innovation with a worldwide impact in cardiac surgery: The story behind "Leipzig School"



*Kalp cerrahisinde dünya çapında etkisi olan inovasyon; "Leipzig Okulunun" hikayesi*

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I was born in 1951 and my first contact with surgery was in the army, when I was 18 years old. I started my duty in the army, and I was sent to a military hospital for six months which was integrated with surgical operation rooms. I met surgeons and talked with them. This was my first contact with a surgical environment, and I was very fascinated with the practice in this hospital.

Later on, I decided to study medicine. In the beginning, I did not know what field of medicine to get into. I studied in Berlin, Bonn, and Sydney between 1972 and 1978 for medical training. Meanwhile, I had an elective in Poland for two months. I went to work under cardiac surgeons there and witnessed the first open heart surgery done in Poland which was performed by Prof. Narkiewicz. She had very much influenced me and my interest in cardiac surgery.

At the end of the medical school, I was an assistant in pediatric cardiology at Bonn University. One day, there was an event in the cath lab which I could handle and manage it. I worked in the blood bank and my performance was appreciated by Prof. Kirchhoff, who was a chief in that time. He offered me a job and I started from the very beginning of my cardiac surgery career.

I was a fully trained cardiac surgeon by 1985 in Bonn and, afterwards, I spent two years of research in cardiology and cardiac surgery in Cedars-Sinai Medical Center, University of California. There I worked with my greatest mentor Prof. Matloff, the chief of the department. At that period of time, general surgeons started videoscopic abdominal operations and I participated in most of them. I thought that it was a good idea to translate it into a heart surgery. Of course, heart surgery was more difficult, but we decided to attempt. When I returned, I stayed in Bonn for several more years and, then, moved to Georg August-Universität Göttingen. There, we already

did some experimental animal studies in dog models. We described the basic concepts of the technique for minimally invasive cardiac operations. Then, I came to Leipzig, and we started minimally invasive coronary bypass surgery, off pump coronary surgery, and robotic surgery and minimally invasive mitral surgery.

When I first started this program in Leipzig, many criticized me and told young colleagues I had around me "This guy is completely crazy". But I saw the huge field, there were five million individuals in this region with a limited access to heart operations and needed to be treated at that time. Also, there was this new building and we could start there very quickly. Somehow, I inspired five young surgeons there, and I allowed them to learn cardiac surgery. They also learned very quickly. They assisted a lot and a lot and I assisted them too. Due to the new technology we developed, this attracted many other surgeons. At that time, everybody in the team had a research project in Leipzig, and we developed something new and improved it. Subsequently, we wrote papers, many papers. We trained many surgeons, more than 25 of them are chief of their departments now, not only in Germany but also in many other countries including Poland, Austria, England, Italy, and Argentina.

I would recommend young surgeons to visit and spend some time in a high-volume, experienced center like this. There are several centers in Europe and also in the United States. I believe this will be helpful for their career. Also, adopting and improving new technologies is important. Cardiac surgery will be more technology-dependent in future years. I would encourage them to get the knowledge of catheter techniques and basic imaging techniques such as echocardiography. More importantly, keep in mind that innovation usually comes from combining totally different things together.

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