

Surgical innovation in Eastern Europe: Insights from an exchange in Poland



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August 5th, 2024 marked the beginning of a journey that changed my view on Medicine and enabled me to understand the significance of cultural diversity and technology in the medical field. My destination was Poznań, Poland where I spent a month working in the Cardiac Surgery and Transplantology Department under the guidance of Doctor and Professor Tomasz Urbanowicz. I collaborated on a project focused on the Neutrophil Extracellular Traps (NETs) in patients with Left Ventricular Assist Device (LVAD). This experience not only meant an academic challenge but also encouraged my personal and professional development.

Immersion in the Operating Room: Key Learnings

Since the first day, my time in the laboratory highlighted the importance of investigation as the motor to medical progress. Processing samples and analyzing data allowed me to refine my scientific skills. One innovative aspect that amazed me was the advanced system of labeling and personalized coding for each sample designed to guarantee precision and traceability in clinical studies.

This approach demonstrates how attention to detail may transform the results of the investigation. In the operating room, I witnessed complex procedures like Coronary Artery Bypass Graft Surgery (CABG) and Aortic Valve Replacement (AVR).

I experienced the prioritization of the medic's well-being in how the medical personnel generally used footwear "Cros" style and short-sleeved doctor coats. These details reflect a combination of commodity and functionality. Moreover, they contributed to an efficient and secure surgical environment. I was also impressed by the empathy of the personnel in the hospital, who took action to ensure my colleagues from Oman had access to adequate surgical uniforms respecting their religious beliefs. This gesture accentuates the importance of an inclusive environment that appraises cultural diversity.



Innovations in Surgical Management

One of the highlights of innovation was the patient management with LVAD, which is crucial for those who suffer from advanced heart failure. These devices not only improve the quality of life but also mean a possibility for heart transplantation. According to Llerena-Velastegui et al., LVAD increases significantly the survival time in patients with end-stage heart failure, emphasizing the role of advanced technology in contemporary medicine. (1)

I was also stunned by the implementation of Robotic Assisted Surgery, a procedure that reduces recovery time and enhances surgical precision. According to the European Journal of Cardio-Thoracic Surgery, the adoption of robotic systems has grown by around 25% in Eastern Europe in the last five years, revealing the commitment to clinical excellence and innovation. (2).

Comparison with the Mexican Surgical System

Comparing the surgical systems between Poland and Mexico revealed challenges and opportunities. In Poland, investment in advanced technology and continuing education are the bases of their success, while in Mexico the budget constraints hinder the adoption of similar innovations.

However, there are pilot initiatives in Robotic Surgery and surgical training efforts that underline the potential to align with global tendencies through greater international cooperation as Tellez-de-Peralta states. (3).

Coexistence and Personal Growth

Beyond medical learning, the exchange was an opportunity to share ideas and experiences with students all around the world. A memorable event was the "National Food and Drinking Party", where each incoming brought traditional dishes of their country. Representing Mexico, I brought "pepitoria" from Sinaloa, "mazapan" -my favorite sweet food-, and "Pulparindo". I also helped prepare "guacamole" and "mole" along with other Mexicans - Grecia and Francisco-. My favorite foods were the cream cakes from Portugal and authentic Italian pasta. This event was a reminder that we all have similitudes and particularities that make us unique.

The time spent outside the hospital enabled me to explore places that left a deep unforgettable mark in my memory. In Poland, visiting the concentration camps of Auschwitz-Birkenau was an impactful reminder of the history of humankind. In Paris, the house of the artist Monet and the Museum of Louvre offered a majestic view of art. Finally, Praga with its delightful architecture fascinated me as one of the most beautiful cities I have ever met.



Final Reflection

This exchange in Poland taught me that Medicine transcends frontiers, connecting with people of different cultures through shared knowledge. The exchange experience allowed me to witness how small actions - from an advanced system of labeling to consideration of medical personnel's well-being- may significantly transform surgical practice.

I also learned great advances in medicine do not arise only from technology but from empathy, inclusion, and continuous commitment to improvement. My time in Poland reaffirmed my belief that international exchanges are an invaluable means of personal and professional development. These experiences not only expand your academic threshold but enrich your capacity to face global challenges with creativity and humanity and find out what we are capable of doing.

This journey meant a reminder that real growth resides at our disposal to collaborate, adapt, and grow together, rather than a learning opportunity. I expect that other students have the chance to live a similar experience as it transforms our perspective not only as physicians but also as a person.

