
PERSONAL NARRATIVE

Pakistan's Intervention Cardiology History (1971-2021)

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Cardiac catheterization is an invasive procedure for an accurate diagnosis of cardiac problems. Right, and left heart catheterization was initiated at NICVD by Dr. Abdul Haq Khan in the early '70s. This helped establish the early open heart surgery for mitral and aortic valve replacement. With the rapidly increasing burden of coronary artery disease, the need for a coronary study was apparent. In 1979 that Prof. Azhar M.A. Farooqi performed the first selective coronary angiography in Pakistan at NICVD, thus laying the ground for revascularisation in the country. A coronary artery bypass surgery program was initiated.

The first-ever coronary angioplasty in Pakistan was performed at NICVD again by Prof. Farooqi. In Rawalpindi, AFIC was established, and coronary angiography and CABG became a regular feature. Punjab Institute of Cardiology added to the momentum. Sporadic coronary balloon angioplasties were being performed at these institutions.

AFIC led from the front in organizing training workshops inviting foreign experts teaching with live case performance with the very enthusiastic Col. Mujeebul Haq as the facilitator. I recall attending one at the new purpose-built facility at AFIC.

Cardiovascular interventions have definitely come of age, reaching maturity. The journey has been tedious, with plenty of humps and bumps. Both public and private sector hospitals have complemented each other in their development and growth. In this brief, I will try to elaborate on the role of private sector hospitals in Karachi during the early phase of interventional cardiology, with a few of us performing the procedures and at the same time struggling to convince the medical community to believe that angioplasty was a viable procedure.

In Karachi, the first-ever department of Cardiology in the private sector became functional in September 1984 at the Liaquat National Hospital with the non-invasive facility. I joined this with the plans to develop invasive cardiology and open-heart surgery institution as the consultant cardiologist. A fully functional and equipped coronary care unit with a step-down care unit monitored via Telemetry was established.

A high-quality image intensifier was already available in the hospital. By then, permanent pacemakers were being implanted via axillary vein with an open cutdown, exclusively by the surgeons and late Dr. Abdul Haque Khan. Taking advantage of this and the radiolucent table in the operation theatre, I introduced the transvenous permanent Pacemaker implantation via subclavian route technique in 1985 in Pakistan. I continued PPM implants in the operation theatre until the cath lab was installed in 1992. PPM implantation has since been the domain of cardiac physicians in Pakistan. There was no electrophysiologist in our country then.

With a growing demand for quality cardiology services, Ziauddin Hospital was the second private hospital after LNH to plan invasive cardiology services. Cardiac catheterization labs were established in these hospitals in 1992 with diagnostic procedures. Few of us started coronary interventions within no time, with balloon angioplasty in these two centers. The number grew at a snail pace until stents were introduced in the mid-nineties.

Starting with Palmer Schultz stent that needed to be mounted manually, crimped, delivered, and inflated in the coronary artery, usually proximal LAD. It was a tedious procedure requiring extreme precision. To our relief, pre-mounted stents became available soon, relaxing the cath lab life to some extent.

The year 2000 was the turning point when our Department of cardiology LNH, in collaboration with the Pakistan Cardiac Society, staged the first-ever live case of angioplasty program in August. The cardiology community overwhelmingly supported the program. I performed three live cases, with the audience in the auditorium where these were screened and eminent interventionists from all over the country being on the panel. Prof. Samad, the then secretary of Pakistan Cardiac Society, moderated.

Following the success of this live case program, we decided to continue it the next year. It was decided

that only Pakistani operators working in Pakistan will be involved in the procedure to help our interventionist mature rather than depending on foreign experts all the time. In 2002 it was named Pakistan Course on Revascularisation and extended to two days. Dr. Mansoor Ahmad and Dr. Abdus Samad, secretary PCS, were the convenors. This program continued for seven years with an increasing number of cases.

In 2004 Pakistan society of interventional Cardiology, led by Prof. Azhar Farooqi, joined as a partner. The number of interventionists increased, and the number of cases in Pakistan rose rapidly from a few hundred to a few thousand within a short time. All institutions were doing an increasing number of cases and needed to be highlighted. Therefore, a live telecast was planned. There were restrictions by telecommunication authorities on using high-level technology required for transmission. The service providers arranged it by using multiple digital telephone lines simultaneously to provide this service. Live telecast took place in 2005 and twice in 2006 in March during the SAARC Congress of Cardiology and August for our annual course. Live cases were transmitted to the auditorium at Liaquat National Hospital from Lahore performed by Prof. Nadeem Hayat Malik, Prof. Hafizullah from Peshawar, Gen. Nuri from AFIC Rawalpindi, Prof. Ishaq and Prof. Shahzaman from NICVD, and Prof. Khawar Kazmi and Sajid Dhakam from AKUH, while I did the rest of the cases from LNH cath lab. The quality of transmission was not comparable to present-day standards, but that did not dim the interest and enthusiasm of our cardiology community. Eminent professors and consultants delivered didactic lectures in between the live cases. No operator from abroad, Pakistani or otherwise, was neither the primary operator nor the secondary operator.

Another first at our department at LNH was the implantation of ICD in the year 2000 with the programming of the device by experts from Medtronic. Today, many electrophysiologists are available, routinely doing the procedure with an extensive fellowship program in all major centers.

By this time, the AKUH cath lab, established in the late nineties, was also busy with routine and complex interventions. National Medical Center or NMC, a private relatively smaller hospital, also picked up as a busy coronary angioplasty center and still is one of the busiest in the private sector in Karachi. There are few smaller private setups with cath labs helping patients with coronary interventions also joined in during this period.

The Tabba Heart Institute, with Dr. Bashir Hanif as the lead interventionist, emerged with the state of the art facilities and services. Their scientific and ethical practice helped the institute and soon became the busiest private center in town. It is now the best-known cardiology center recognized in the country and well respected internationally. Dr.

Bashir Hanif has been instrumental in helping to regulate the practice of interventional cardiology. Today all major cities in the country have busy centers in the private sector performing complex cardiovascular interventions to the satisfaction of cardiac patients.

Finally, I would like to congratulate Prof. Tariq Ashraf for having accepted this major responsibility of initiating this journal and contributing to building a strong foundation in developing Interventional Cardiology in Pakistan.

Disclaimer

It is personal point of view written in best of Professional knowledge and experience.