



THE AGA KHAN UNIVERSITY

eCommons@AKU

Department of Surgery

Department of Surgery

June 2014

Vascular surgery in Pakistan: critical issues

Zia Ur Rehman

Aga Khan University, ziaur.rehman@aku.edu

Ziad Sophie

Aga Khan University, ziad.sophie@aku.edu

Follow this and additional works at: http://ecommons.aku.edu/pakistan_fhs_mc_surg_surg



Part of the [Surgery Commons](#)

Recommended Citation

Rehman, Z., Sophie, Z. (2014). Vascular surgery in Pakistan: critical issues. *JCPSP: J Coll Physicians Surg Pak.*, 24(6), 381-382.

Available at: http://ecommons.aku.edu/pakistan_fhs_mc_surg_surg/171

Vascular Surgery in Pakistan: Critical Issues

Zia Ur Rehman and Ziad Sophie

Vascular surgery has been established as a separate specialty in many countries of the world, but has been slow to develop in Pakistan. One of the many reasons about its slow progression as a separate specialty is misconceptions and myths associated with it. One of them is that vascular diseases are diseases of the west and are non-existent in Pakistan. There is no ownership of a patient with a painful extremity or gangrenous toes and there is a doubt in medical community that vascular reconstruction does save limbs and lives. Other reasons are lack of adequate vascular surgeons and training programs in Pakistan. Till recent past, there were only a handful of well-qualified vascular surgeons in the country. Vascular surgery was thought to be part of general surgery or a part time activity of cardiothoracic surgery. The field was slow to develop due to non-recognition at the national level. There are still no separate vascular surgery units in any teaching institute worth mentioning. Vascular surgery is in its infancy; Needless to say surgeons are facing an identity crisis.¹ Let alone the general public, even the medical doctors do not understand which patient groups are treated by this group of surgeons. This leads to delay in referral and increased suffering of the patients with vascular diseases.

Vascular diseases kill and cripple almost as many people as do heart disease and cancer. The sheer magnitude of the problem of vascular diseases in this part of the world is alarming. Although there is ever increasing prevalence of diabetes mellitus in Pakistan, this is just a small pointer to the vast numbers of the undiagnosed vascular cases. Patients with severe vascular diseases are being treated for backache and musculoskeletal pains for years. It is only the onset of peripheral gangrene which brings attention to the fact that arterial pulsations have been absent for a long period of time and remain unnoticed. After diagnosis the only treatment of these unfortunate patients has been amputations leaving the primary vascular issue unsolved. The lack of awareness of the disease and specialty is so grave that even some cardiothoracic surgeons have never heard of a separate, independent

vascular surgery department or a vascular surgeon. A truly tragic situation indeed! There is an epidemic of vascular risk factors due to rapid increase of diabetes, obesity, sedentary life style and smoking in the Pakistani population and so is the rise in the incidence of peripheral vascular arterial diseases (PAD). Pakistan is one of the countries where smoking is rapidly on the rise especially in the younger population group.

Diabetes mellitus is an important risk factor for PAD. The number of people with diabetes is growing in Pakistan as a result of urbanization, sedentary life style and obesity. Pakistan is considered to be one of the countries with the largest population of people with diabetes and is ranked seventh globally by the International Diabetes Foundation.² The prevalence of diabetes is high in Pakistan ranging from 7.6% to 11% among adults.³ It is important to diagnose diabetes early and offer treatment to avoid preventable complications of the coronary, cerebral and peripheral vasculature. There are number of studies favouring this fact in the local literature. Ali *et al.* showed a high frequency of peripheral arterial disease (PAD) in the diabetic Pakistani population. As many as 39.28% patients have ankle brachial index (ABI) less than 0.9 to be labelled as suffering from PAD.⁴ A multi-center cross-sectional study was carried out at eight centers in all the provinces of Pakistan on type-2 diabetics. There were 830 patients in the study; prevalence of PAD was 31.6%.⁵

Diabetes and smoking are associated with high incidence of carotid artery and coronary artery disease. Shahid *et al.* showed that the presence of diabetes mellitus is associated with diffuse coronary artery disease and significant carotid artery disease in patients undergoing coronary artery bypass grafting. Carotid artery stenosis was observed in 30 (19.2%) diabetes as compared to 20 (9%) non-diabetes ($p < 0.004$).⁶

Obesity and overweight is also associated with increased incidence of PAD. Although a global problem, its effects can be seen in Pakistan. More than 1.1 billion adults worldwide are overweight and 312 million of them are obese.⁷ A study analyzing the data from the National Health Survey of Pakistan (NHS 1990 - 1994) showed that the prevalence of overweight adults was 25.0% (BMI > 23 kg/m²), whereas 15.7% were found to be obese (BMI > 25 kg/m²).⁸ A recent study from Baluchistan showed that the risk factors for diabetes such as overweight, obesity, smoking, hypertension and family history of diabetes have increased over time in the young adults of rural Baluchistan.⁹

Department of Surgery, The Aga Khan University Hospital, Karachi.

Correspondence: Dr. Zia Ur Rehman, Consultant Vascular Surgeon, Department of Surgery, The Aga Khan University Hospital, Stadium Road, Karachi.

E-mail: ziaur.rehman@aku.edu

Received: April 29, 2014; Accepted: May 8, 2014.

Despite having no national registries, it is a common observation that chronic renal failure is on rapid rise. There is an epidemic of patients with chronic renal failure requiring hemodialysis access. It requires adequate trained manpower to handle this issue if we really want to improve the quality of life of this patient group.

In the recent past, extremity vascular injuries have increased manifold in Pakistan due to increase in terrorist activities, street crimes and high-speed motor vehicle accidents.^{11,12} Many limbs can be saved if timely intervention can be taken by skilled hands for these ischemic limbs.

The big share of vascular surgery patients is taken up by cardiac surgeons, general and orthopaedic surgeons with some experience or interest in vascular surgery. In reality, cardiac surgeons' operative peripheral vascular work is less than 2% and their training is focused only towards cardiac surgery. The approach, diagnosis and management of vascular diseases is very different from the approach to a patient with heart disease. There is no doubt that the cardiac surgeon is technically very competent to perform peripheral vascular operations, but they are universally burdened with coronary bypasses and valve replacement. Same is true for general surgeons, whose training has no formal rotation in vascular surgery and hence have very little experience of dealing with these patients. Recently, interventional radiologists and cardiologists have started to correct the lesions of occluded arteries in vascular disease patients. This confusion leads to ownership problems of these patients, lack of communication, part-time care and lack of holistic approach which ultimately leads to suboptimal management of these patients. Most of the times, the intervention may be more harmful to the patients than of any benefit.

Provision of preventive procedures to improve the quality and quantity of life of the patient is the crux of any health care system. Pakistan's health system will need utmost consideration for the establishment of effective vascular diseases screening programs. This will target the 'high risk' population groups such as the elderly, the diabetics, smokers and will provide preventive strategies to decrease the incidence of disability, amputation and mortality for them. Most procedures and surgeries done by a vascular surgeon are preventive in nature to decrease the incidence of stroke, amputations and mortality. They can also improve the quality of life of patients on hemodialysis due to chronic renal failure and patients suffering from chronic venous insufficiency. It will lead to better quality and quantity of life of these patients and decrease the burden for the health system. However, it requires an aggressive, focused effort to make it possible.

Recently, a vascular surgery Fellowship has been started at a University Hospital. It is a 2 years long

fellowship programs. Requisite for this Fellowship program is that candidate should have completed 5 years of general surgery structured training and passed the exit exam. So far, 3 Fellows have graduated from this programme. However, surgeons joining this program and leaving general and laparoscopic surgery career, face a huge opposition from colleagues, based on the aforesaid myth that vascular diseases are essentially diseases of West and do not exist here. In practice, this is totally untrue. On the contrary patients present with late and severe forms. Demand and opportunities are huge for anyone who joins this specialty. The vascular surgery Fellowship program is in the process of recognition from College of Physicians and Surgeons Pakistan and hopefully soon there will be more centers of training for vascular surgeons which will decrease the suffering of patients from vascular disease.

It is high time that both the medical community and the general public understand the need and existence of this as a separate specialty and steps are taken to fill this huge gap in our health system.

REFERENCES

1. Singh D, Jawaid SA. Identity crisis: who is a vascular surgeon? *Pak J Med Sci* 2006; **22**.
2. International Diabetes Federation. IDF diabetes atlas. Brussels, Belgium: *International Diabetes Federation*; 2009.
3. Hakeem R, Fawwad A. Diabetes in Pakistan: epidemiology, determinants and prevention. *J Diabetol* 2010; **3**:4.
4. Ali Z, Ahmed SM, Bhutto A, Chaudhry A, Munir SM. Peripheral artery disease in type-II diabetes. *J Coll Physicians Surg Pak* 2012; **22**:686-9.
5. Akram J, Aamir A, Abdul Basit, Qureshi MS, Mehmood T, Shahid SK, *et al*. Prevalence of peripheral arterial disease in type-2 diabetes in Pakistan. *J Pak Med Assoc* 2011; **61**:6448.
6. Iqbal SP, Khan RA, Ahmer S. Antipsychotic treatment and weight gain: does risperidone behave differently in Pakistani psychiatric patients? *J Ayub Med Coll Abbottabad* 2011; **23**:66-9.
7. Haslam DW, James WP. Obesity. *Lancet* 2005; **366**:1197-209.
8. Jafar TH, Chaturvedi N, Pappas G. Prevalence of overweight and obesity and their association with hypertension and diabetes mellitus in an Indo-Asian population. *CMAJ* 2006; **175**:1071-7.
9. Fawwad A, Alvi SF, Basit A, Ahmed K, Ahmedani MY, Hakeem R. Changing pattern in the risk factors for diabetes in young adults from the rural area of Baluchistan. *JPMA* 2013; **63**:1089.
10. Sakhuja V, Kohli HS. End-stage renal disease in India and Pakistan: incidence, causes, and management. *Ethn Dis* 2006; **16**:S2-20-3.
11. Hussain ST, Aslam S, Khan RA, Mannan P, Khan J, Collin J. An observational study of 256 cases of vascular trauma in North West Province of Pakistan. *Ann R Coll Surg Engl* 2001; **83**:388-91.
12. Gupta R, Rao S, Sieunarine K. An epidemiological view of vascular trauma in Western Australia: 5 years study. *ANZ J Surg* 2001; **71**:461-6.

