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AORTIC DECANNULATION - AN ALTERNATIVE TECHNIQUE

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LETTER TO EDITOR

AORTIC DECANNULATION – AN ALTERNATIVE TECHNIQUE

I am herewith enclosing a LETTER TO EDITOR regarding an article that came in the Asian Cardiovascular & Thoracic Annals in - How To Do It section.

An Alternative and Safer Method for Aortic Decannulation.

Manninder S Kalakat, and Jitender M Parmar from the Department of Cardiothoracic Surgery, North Staffordshire Royal Infirmary, West Midlands, UK. Asian Cardiovascular & Thoracic Annals 2005; Volume 13:88–89.

Dr. JP and MSK had described an alternative and safer method for aortic decannulation in this article. At the outset I would like to congratulate them for publishing the article on the use of side clamp for aortic decannulation. Though this technique would have been used by most of the surgeons, it would not have crossed their minds to ever mention this.

Definitely, this could well be an alternative method when things are going bad. But its safety as mentioned by the authors themselves could well be questioned.

As its disadvantages (like- possibility of trauma to aortic wall and dislodgement of plaque or any atheromatous material during the application of side biting clamp) could prove disastrous to the outcome of surgery, its safety is definitely questionable.

In this present era of off pump CABG and Aortic - No Touch technique when surgeons are worried about neurological problems, using a side clamp to decannulate an aorta should be definitely thought about.

Using double purse strings for aortic cannula had reduced the incidence of bleeding. But in case, the purse strings are cut or when the tissues are cut through, use of the Hegars dilator of appropriate size has been very useful. Though I had to use it only a couple of times, I have found having a set of Hegars dilator in the cardiac OR, a very useful tool to be available in the armamentarium of a cardiac surgeon.

If a purse string cuts through, all we need is to block the hole with the left index finger and insert an appropriate sized Hegar into the aortic opening with the other hand. Then conveniently place appropriate purse strings with or without Teflon and remove the Hegar while tightening the purse string.

This is a technique I had learned from Royal Adelaide Hospital, where I had seen Dr. David Craddock, the then Head of Cardiac Surgery, use the Hegar with excellent results. This is the same principle around which the Vettath s Anastomotic Obturator (VAO) had been developed.¹

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REFERENCE:

1. Murali.P.Vettath. Vettath s Anastomotic Obturator: A Simple proximal anastomotic device. The Heart Surgery Forum # 2003-73305.6(5), 2003

METABOLIC SYNDROME AND ISCHEMIC MITRAL REGURGITATION: OTHER PIECE OF THE JIGSAW

We read with interest the paper by Shin et al in which they stated that the causes of mitral regurgitation were degenerative in 238 (54%), rheumatic in 134 (31%), and others in 65 (15%). Their study extended from January 1994 to January 2002 and included 437 patients with mitral regurgitation¹. The presence of metabolic syndrome in addition to the risk factors mentioned by Shin et al may accelerate the process of mitral regurgitation especially ischemic mitral regurgitation (IMR). The clustering of insulin resistance, dysglycemia, dyslipidemia, hypertension and central obesity represent the major features of metabolic syndrome. These clusters of factors may share common etiology and each of which is a risk factor for cardiovascular disease. The metabolic syndrome appears to affect 10% to 25% of adult

populations worldwide. Several studies have described the association between metabolic syndrome, diabetes and cardiovascular disease^{2, 3}.

A search of the midline for the last 35 years has shown that there are 777 papers addressing the link between metabolic syndrome and ischemic heart disease (IHD) and none linked metabolic syndrome to ischemic mitral regurgitation (IMR), a serious clinical problem facing both the cardiologists and cardiac surgeons. Ischemic mitral regurgitation is caused by a prior myocardial infarction which causes the ventricular remodeling that leads to mitral regurgitation⁴. The myocardial ischemia can result in altered ventricular geometry with mitral valve annular dilatation. The inferioposterior wall bulges outward, displacing the attached papillary muscles apically and outward. The leaflets, tethered at both end, cannot close effectively and are restrained within the left ventricle; this effect is compounded by a decrease in the ventricular force to close the leaflet thus causing IMR⁴. Furthermore, the incidence of IMR is estimated to be around 5% to 8% in patients with ischemic heart disease undergoing coronary artery bypass grafting (CABG) and in 30% of patients following myocardial infarction. It is associated with higher cardiovascular mortality within 5 years if left uncorrected^{5,6}.

Patients with metabolic syndrome represent a high-risk group for coronary heart disease as well as for type II diabetes. Because the prevalence of these two conditions is likely to increase with increasing prevalence of metabolic syndrome, it is reasonable to propose that metabolic syndrome may be blamed for the increase of the incidence of IMR. Moreover, this hypothesis may also contribute to explain the increase in the burden of metabolic syndrome may affect not only diabetologist and cardiologists but will extend to affect cardiac surgeons.

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REFERENCES

1. Shin HJ, Lee YJ, Choo SJ, Song H, Chung CH, Lee JW. Analysis of recurrent mitral regurgitation after mitral valve repair. *Asian Cardiovasc Thorac Ann.* 2005 ;13:261–6.
2. Wild SH, Byrne CD, The Global burden of the metabolic syndrome and its consequences for diabetes and cardiovascular disease: In; Byrne CD, Wild S editors; *Metabolic syndrome*, England Wiley & Sons Ltd: 2005: 1–32
3. Ahmed MH, Byrne CD, non-alcoholic steatohepatitis: In; Byrne CD, Wild S editors; *Metabolic syndrome*, England Wiley & Sons Ltd: 2005: 279–303
4. Levine RA. Dynamic mitral regurgitation – More than meets the eye. *New England Journal of Medicine.* October 14, 2004. 1681–1684.
5. Balu V, Hershowitz S, Zaki-Masud AR, Bhayana JN, Dean DC. Mitral regurgitation in coronary artery disease. *Chest* 1982; 81:550–5
6. Lamas GA, Mitchell GF, Flaker GC, Smith SC Jr, Gersh BJ, Basta L et al. Clinical significance of mitral regurgitation after acute myocardial infarction. *Survival and Ventricular Enlargement Investigators.* *Circulation* 1997; 96 (3): 827–833.

OPEN HEART SURGERY IN A DEVELOPING COUNTRY

I read with interest the recent editorial by Probal Ghosh, FRCS, Setting Up an Open Heart Surgical Program in a Developing Country.¹ This represents an update by Dr Ghosh of a previous masterful overview of the establishment of adequate care in emerging economies like India.² To quote Rudyard Kipling: "I keep six honest serving-men (They taught me all I knew); Their names are What and Why and When and How and Where and Who". At the tactical or managerial level the editorial gives specific details on Where, What, How, and Who. However, further elaboration on Why and When would be useful and informative. The Why may seem obvious. It is clear that the growth of cardiac surgery favors the emerging economies. The backlog of patients with rheumatic and congenital heart disease is immense. Added to this is the epidemic rise of atherosclerotic coronary artery disease, due primarily to the notable risk factors (hypertension, hyperlipidemia, Westernized diet, smoking, inactivity, and lifestyle changes). In China alone, it is estimated that over 8 million people are in need of cardiac surgery.³ When to start a new program is also difficult. Further discussion of this is warranted.

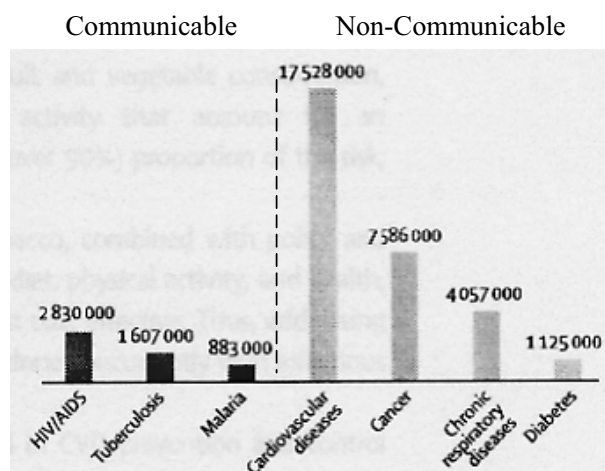


Figure 1: Projected global deaths by major causes, all ages, 2005.⁵

For example, a valid argument can be made for the utility or futility of allocation of limited financial resources for a high priced curative effort available to only a limited portion of the population in need. Also, what is the motivation for this entire effort? Is it purely idealistic, i.e. a desire to help alleviate this heavy chronic disease burden, or is it also fueled by economic considerations to make money for eager venture capitalists. Perhaps it is a combination of both idealistic and realistic factors. In emerging economies there is ready access for those who have financial support, and limited access for those without financial support, be it government, private, or self pay.

A compelling argument can be made for a paradigm shift in our thinking on curative cardiac care. The development of a product line or disease focused effort may be a useful methodology. This means that the varied programs or projects proposed to provide access to this population with disease or at risk include a plan or process that includes prevention, promotion, diagnosis, treatment, and rehabilitation. This holistic approach would elicit the help and support of the entire health care sector, including preventive medicine and public health. They would be working in partnership with their curative

medicine partners to develop strategies that cover a wider population with established disease or at risk. Dr. Ghosh and his team should be congratulated for their efforts in a very demanding, challenging, and yet rewarding area. Fifty-seven million people die per year on the planet with over 17 million from cardiovascular disease.⁴ Non-communicable diseases are clearly a greater cause of death than communicable diseases and will continue to rise. The major causes of these deaths are noted in figure (1).⁵ The World Heart Forum has published a definitive overview of cardiovascular disease, with strategies for prevention and amelioration of risk factors.⁶ We, the cardiothoracic surgeons at the high tech, high cost end of this horizontal paradigm shift need to work along with them to develop both strategic and tactical plans/programs that balance cost, access, and improved technology. This is a tremendous challenge, especially in the emerging economies.

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REFERENCE

1. Ghosh P. Editorial: Setting Up an Open Heart Surgical Program in a Developing Country. *Asian Cardiovasc Thorac Ann* 2005;13:299-301.
2. Ghosh PK, Magotra RA. In my opinion: Adequate Care? Conundrum for Nonaffluent Countries <http://www.ctsnet.org/doc/9227>
3. Zhu X, Zhang B. Current Status and Trends of Cardiac Surgery in China-abstract. *World Society of Cardiothoracic Surgeons, 14th World Congress, Beijing, China Oct 14-17, 2004.*
4. Pezzella AT. *International Cardiac Surgery; A Global Perspective. Seminars in Thoracic and CV Surg* 2002;14:298-320.
5. Fuster V, Voute J. Comment: MDGs: Chronic diseases are not on the agenda. *Lancet* 2005;366:1512-1514.
6. Smith SC, Jackson R, Pearson TA et al. Reviews: Current Perspectives-Principles for National and Regional Guidelines on Cardiovascular Disease Prevention. *Circulation* 2004;109:3112-3121.

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