

Mitral valvotomy at Birendra Military Hospital

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INTRODUCTION

Shree Birendra Hospital is a 400 bedded referral military hospital situated in Kathmandu Nepal. It has been providing medical & Surgical services to regular and retired army personnel and their families, for the last 75 years. It also provides specialized services in medical and surgical sub specialties like Neuro Surgery, Cardio-thoracic surgery, Uro-surgery. Gastro-enterology surgery, Laproscopic surgery, Cardiology, Gynaecology, Neuro-Psychiatry, Nephrology & various other specialities. Diagnostic facilities are provided by advance Diagnostic facilities are provided by advance pathology and Radiology departments (MRI CT scan, Bronchoscopy, G.I. Endoscopy, Echo-cardiography etc).

Cardio-Thoracic Surgery unit started its services in this hospital from the year 2050 B.S. (1994 A.D) The first Cardiac surgery started with a successful operation for a patient with mitral stenosis by closed heart surgery (closed mitral valvotomy) in the year 2051 B.S, 23 Chaitra; (6th April, 1995 A.D.). cardiac problems are not usually encountered among regular army personnel due to strict medical screening during army recruitment so cardiac surgery is generally required for family members of the serving & retired army personnel instead. 1

MATERIALS AND METHODS

From 2051 BS to 2057 BS (1995 to 2000 A.D.). 7 patients underwent Closed Mitral Volvotomy (CMV), among them 6 were female and 1 male. Their age ranged from 15 years to 40 years and there was no operative mortality. 2,3 The selection criteria for CMV was patient with tight mitral stenosis with Mitral Valve Area (MVA) less than or equal to 1cm² on Echocardiography, sinus rhythm, no clot in LA, ASO titre negative, no significant calcification of mitral Valve or mitral Regurgitation. Patients in clinical classification of NYHA class III to IV. 4,5

RESULTS

The routine surgical procedure was mitral valvotomy with digital commissurotomy followed by Tubbs dilator application up to 2.5 cm. the result of CMV was satisfactory clinically & there were no significant post surgical mitral regurgitation. There was significant clinical improvement of patient post operatively & patient were clinically in NYHA class I to II. There was no case of mitral re-stenosis after 4 years of CMV rest of 6 patients were clinically doing well during follow up of 5 years of operation. 6,7,8

On post operative Echocardiography MVA was found to be 1.8cm² to 2.2 cm². one patient with post operative CMV developed mitral re-stenosis and had Percutaneous Transvenous Mitral Commissurotomy (PTMC) done at Shahid Gangalal Heart Centre in 2061.

DISCUSSION

History of mitral valvotomy starts back in 1923 AD when Levin & Cuttler successfully performed closed mitral

valvotomy in an 11 year old girl with severe mitral stenosis. With the development of Heart Lung Machine Lillehei & Kirklin performed open mitral valvotomy in 1955. since 1990s with advancement of invasive cardiology successful percutaneous mitral commissurotomy was started in many centres of world. With the beginning of the Maoist insurgency from 2052 B.S. and with the involvement of nepal Army in insurgency control movement from 2058 B.S; this hospital was involved in management of insurgency casualties of Nepal army personnel & Civillians. Thus the cardio thoracic surgical unit was involved in the management & surgery of thoracic trauma patient during that period.

During last few years with the advancement of invasive cardiology & development of non surgical Percutaneous Transvenous Mitral Commissurotomy (PTMC) in Nepal, most of the patients with mitral stenosis were referred to Shahid Gangalal Heart Centre. With the availability of non surgical PTMC, the oldest cardiac surgical procedure closed mitral valvotomy is almost obsolete in most of cardio-thoracic centres. Now closed mitral valvotomy is done only as an emergency surgical procedure in few cardio-thoracic centres in the world.

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