INTRODUCTION

I N T R O D U C T I O N

This study aims to assess and evaluate the benefit of closed mitral commissurotomy regarding the relief of symptoms and the well-being of the patients. This work includes all the cases operated upon since the beginning of the work in the cardio-thoracic surgery department in Ain Shams University Hospitals from September 1960 to June 1977.

The total number of cases on whom surgery was performed in the above-mentioned period was 913 cases, 485 cases of which were males and 428 cases were females. The different age and sex groups together with the various modes of presentation as well as the incidence of the cases of atrial fibrillation will be discussed.

The aim of this work is also to analyse all the cases operated upon concerning the operative findings, the results of surgery besides any complication that may have appeared in the operating theatre or post-operatively whether early or late during the follow-up. Hence morbidity, specially the problem of mitral restenosis , and mortality are discussed extensively and displayed clearly in the associated tables and graphs. Relevant conclusions are drawn from this analysis.

Historical background of surgical management of the Mitral valve.

In 1898 Samways, and in 1902 Brunton, made the prophetic suggestion that mitral stenosis would eventually prove amenable to surgical correction. Klebs, Mac-Callum and Mcclure (1906), and Cushing and Branch (1908) reported experimental work on valvular surgery in the dog. Allen and Graham (1922) developed a cardiac valvulotome in which an optical system was incorporated to aid in visualizing the valve. This instrument was employed unsuccessfully in one human case. In 1923, Cutler and Olevine made a bold, imaginative effort to treat mitral stenosis but unfortunately reasoned erroneously that resection of part of the stenosed valve was necessary. The resulting mitral insufficiency produced a prohibitive operative mortality. Souttar's in 1925 described a successful closed digital mitral commissurotomy through the left atrium in one patient. In 1929 Cutler and Beck presented their final report on five cases of mitral stenosis surgically treated by partial excision of the valve. There was only one longterm survival, the first case, who lived 4½ years, but for a combination of reasons no further patients were operated upon.

The field remained static for the next 20 years, until Bailey (1949) and Harken and associates (1948) independently demonstrated the commissurotomy of the mitral valve by means of the index finger inserted through the atrial appendage. The inability to achieve a sufficiently wide opening in many instances encouraged the supplementary use of cutting instruments, metal dilators, and in certain cases, open-heart techniques. Cutting instruments for blind incision were popular in in the early 1950 but were soon abandoned because of the high incidence of incompetence created by inadvertent incision into the leaflets or transection of chordae tendineae.

Blunt dilators inserted into the valve orifice from above the valve (trans-atrial) Beck 1954 and Glenn 1957 or from below the (valve trans-ventricular) by Tubb's, Logan and Turner 1959 were employed in the fifties and soon became the preferred method of supplementing digital commissurotomy.

In recent years, with the increase safety of cardio-pulmonary bypass, more and more groups have adopted routine open commissurotomy, which is currently the procedure of choice, if a valvuloplasty is not satisfactory prosthetic, replacement can be done.