

MOROCCAN EXPERIENCE IN PERCUTANEOUS MITRAL DILATION; THE ALTERNATIVE TREATMENT TO SURGERY

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Background:

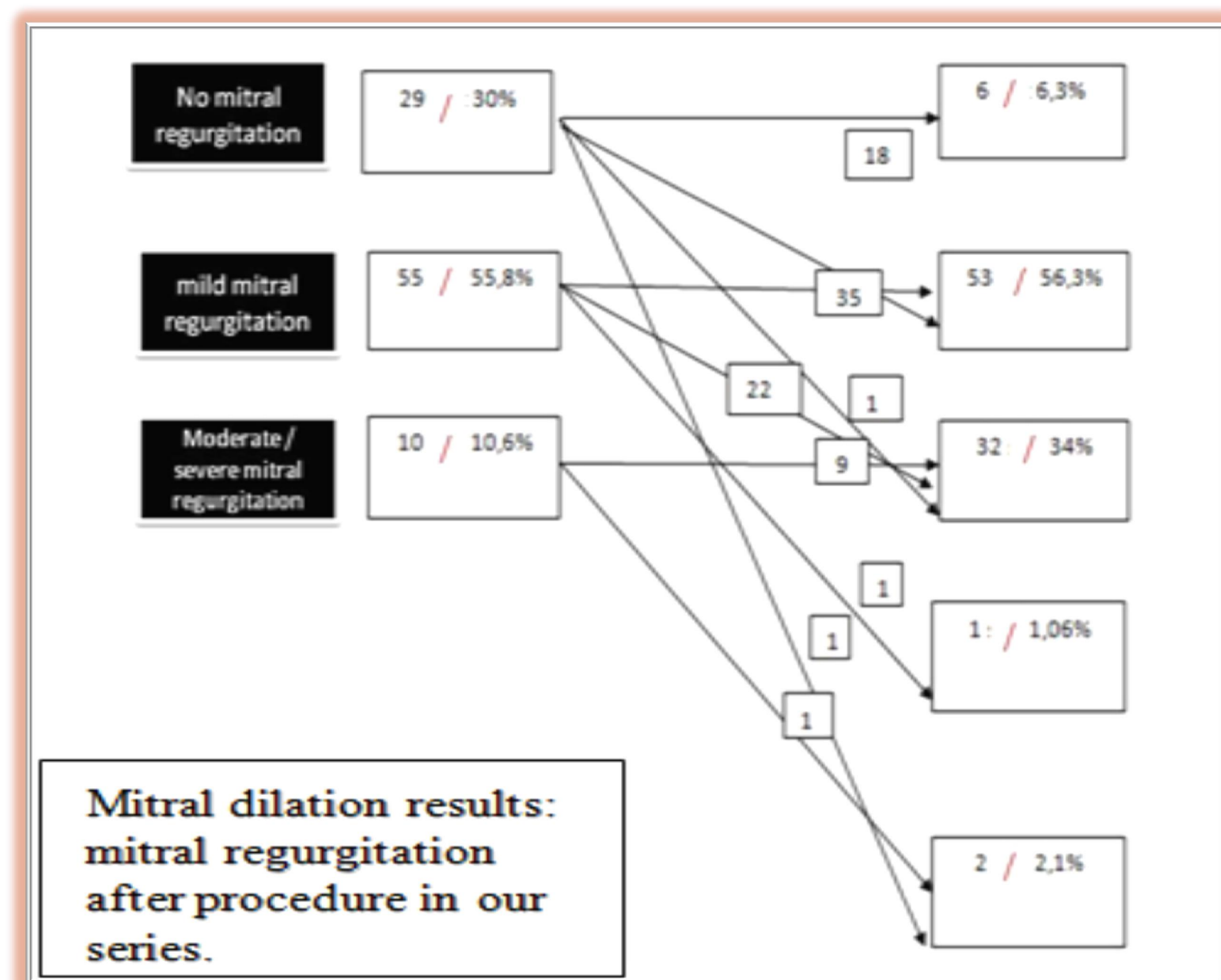
Last years, various techniques of mitral dilatation balloon catheters have been proposed as an alternative to surgical commissurotomy until the introduction of percutaneous mitral dilatation in 1984 by DR Kanji Inoue (1).

The experience of the cardiology department of the hospital Ibn Rochd of Casablanca covering 94 patients collected during the period between January 2008 and August 2010 showed the following results:

Results:

- ❖ Mean age: 36 ± 10 years with female predominance (83%). (Three-pregnant women were included).
- ❖ Balloon mitral commissurotomy was achieved in 91 patients but not realizable in 2 patients cause of inability to cross the mitral valve.
- ❖ 91 patients were symptomatic class functional II to III of NYHA.
- ❖ 18 patients with atrial fibrillation (19.1%).
- ❖ The mean mitral-area about 1 cm^2 (range 0.5 to 1.5 cm^2).
- ❖ Mean Wilkins score: 7.48 ± 1.2 .
- ❖ Percutaneous mitral commissurotomy was performed using the method of Inoue balloon.
- ❖ Mean fluoroscopy: 7 min.
- ❖ Immediate satisfactory results were obtained in 84% of patients in our series:
 - ✓ Similar results between women and men.
 - ✓ Similar results between adults and young patients (age less than 18 years.)
 - ✓ Almost identical results between patients who underwent surgical intervention is already one on either percutaneous mitral valve or the patient never made.
 - ✓ In 2 patients, mitral regurgitation became severe requiring mitral valve replacement.
 - ✓ Mitral area increased from 1 cm^2 to 1.8 cm^2 and the transmitral mean gradient decreased from $15 \text{ mmHg} \pm 7$ to $6.5 \text{ mmHg} \pm 2.8$.
 - ✓ We noted regression of pulmonary hypertension from $47 \text{ mmHg} \pm 24$ to $35 \text{ mmHg} \pm 15.2$.
- ❖ A failure rate of 4,2% (2 cases of rupture of the chordae tendinae. And a case of a pre tamponade).

Mitral dilation results: mitral areas before and after procedure in our series compared to literature.				
		Number of patients	Mitral area Before dilation	Mitral area After dilation
Arora	(2)	600	0,75	2,2
Chen	(3)	4832	1,1	2,1
NHLBI	(4)	738	1	2
Lung	(5)	1514	1,1	2
Patel	(6)	23	0,8	2,1
Our series		94	1	1,8



Conclusion:

In a view of the results satisfactory, percutaneous mitral dilation has proven effective for the treatment of mitral stenosis establishing itself as an alternative treatment to surgery in which the cost still remains high in our context.

References:

1. R. O. Bonow, MD, MACC, FAHA, Chair; Blase A. Carabello, MD, FACC, FAHA; K. Chatterjee, MB, FACC; A. C. de Leon Jr, MD, FACC, FAHA; D. P. Faxon, MD, FACC, FAHA; M. D. Freed, MD, FACC, FAHA; W. H. Gaasch, MD, FACC, FAHA; B. W. Lytle, MD, FACC, FAHA; R. A. Nishimura, MD, ACC, FAHA; P. T. O'Gara, MD, FACC, FAHA; R. A. O'Rourke, MD, MACC, FAHA; C. M. Otto, MD, FACC, FAHA; P. M. Shah, MD, MACC, FAHA; J. S. Shanewise, MD. A Report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Writing Committee to Revise the 1998 Guidelines for the Management of Patients With Valvular Heart Disease): Endorsed by the Society of Cardiovascular Anesthesiologists, Society for Cardiovascular Angiography and Interventions, and Society of Thoracic Surgeons 2006 WRITING COMMITTEE MEMBERS;
2. R.Arora I. GS. Kalra, GS. Murty , V.Trehan, N. Jolly, JC. Mohan, KK. Sethi,M. Nigam, M. Khalilullah. Percutaneous transatrial mitral commissurotomy: Immediate and intermediate results. J Am Coll Cardiol. 1994 May;23(6):1327-32.
3. Chen CR1, Cheng TO, Percutaneous balloon mitral valvuloplasty by the Inoue technique: a multicenter study of 4832 patients in China. Am Heart J. 1995 Jun;129(6):1197-203.
4. Multicenter experience with balloon mitral commissurotomy. NHLBI Balloon Valvuloplasty Registry Report on immediate and 30-day follow-up results. The National Heart, Lung, and Blood Institute Balloon Valvuloplasty Registry Participants. Circulation 1992 Feb;85(2):448-61.
5. B. lung, MDa; B. Cormier, MDa; P. Ducimetiere, PhDb; J.M.Porte, MDa; O. Nallet, MDa; P.L. Michel, MDa; J. Acar, MDa; A. Vahanian, MDa Functional results 5 years after successful percutaneous mitral commissurotomy in a series of 528 patients and analysis of predictive factors . J Am Coll Cardiol. 1996 Feb;27(2):407-14.
6. JJ. Patel, D.Shama, AS.Mitha, D.Blyth, F.Hassen, BT.Le Roux , S..Chetty Balloon valvuloplasty versus closed commissurotomy for pliable mitral stenosis: a prospective hemodynamic study. J Am Coll Cardiol. 1991 Nov 1;18(5):1318-22.