Transapical mitral valve-in-valve implantation is an effective and safe procedure in high-risk patients in whom surgery is contraindicated. The current approach, with almost no restrictions on indications, confronts us with a large number of patients who represent a great challenge for their treatment due to age, comorbidities, ventricular and prosthetic dysfunction, etc. Risk scores greatly contribute to the indications and restrictions of surgical procedures. This may determine an extreme limit and discourage a conventional surgical procedure, as in the case described.

The purpose of our presentation was to demonstrate that this procedure is feasible in our context, and our outcomes are of high medical quality.

Mid- and long-term follow-up of patients undergoing this technique is necessary, although the initial evidence shows a favorable and encouraging panorama in this type of patients.

Current experience with percutaneous mitral valve replacement techniques is very scarce, and surgical mitral valve repair techniques have demonstrated a higher benefit over valve replacement, in part due to the preservation of the chordae tendineae and papillary muscles. (6)

With the advent of new bioprostheses, percutaneous mitral valve replacement will have an exponential growth; after the initial stage of the first experiences, feasibility and safety of these valves will have to be demonstrated and supported by randomized studies to determine their prognostic value in the treatment of mitral valve disease.

The development of minimally invasive procedures requires state-of-the-art technology, since it is impossible to develop this type of program without excellent resources. We are certain these procedures will be progressively used by all health centers in Argentina.

Conflicts of interest

None declared.

(See authors' conflicts of interest forms on the website/ Supplementary material).

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Refractory Neonatal Atrial Flutter

Atrial flutter (AFl) is a rare tachyarrhythmia that may occur in utero or on the first few days after birth, with a frequency of atrial contraction (saw-tooth P waves) ranging from 280 to 450 beats per minute (bpm). It accounts for about 32% of all neonatal arrhythmias and it may be asymptomatic or present with severe heart failure. Both the immature myocardium and the high pressures in the right atrium during the perinatal period are factors that may promote atrial re-entry, causing flutter in the fetus or the neonate. In general, AFl is not associated with structural heart disease, and treatment should consider the use of antiarrhythmic drugs or synchronized cardioversion. (1-3)

We describe the case of a full-term male neonate, large for his gestational age (3875 g), delivered by a 27-year-old multigravida woman, born by emergency C-section due to fetal tachycardia diagnosed hours before delivery. On admission to the NICU, the baby presented with a heart rate (HR) of 214 bpm. ECG showed saw-tooth P waves suggestive of AFl with a 2:1 conduction pattern (atrial frequency: 375 bpm, ventricular frequency: 214 bpm). Chest X-ray revealed cardiomegaly (Figure 1A & B), and echocardiography reported systolic dysfunction (EF: 58%), with no structural heart disease. The patient was started on intravenous amiodarone (loading dose: 5 mg/kg), and then in continuous infusion (5 ug/kg/min) for 12 hours with no positive response, so the amiodarone dose was increased to 10 ug/kg/min. A second ECG reported no variations, therefore cardioversion at 1 joule/kg was performed on two continuous occasions (2-min interval) and sinus rhythm was achieved (Figure 2). Amiodarone infusion was administered for three more days, and then propranolol therapy was started (2 mg/kg/day). A new echocardiography reported mild pulmonary hypertension (36 mmHg) and thus sildenafil was added (4 mg/kg/day). Serology was negative for HIV, VDRL, and TORCH. Thirteen days after birth, the patient remained with sinus rhythm and normal

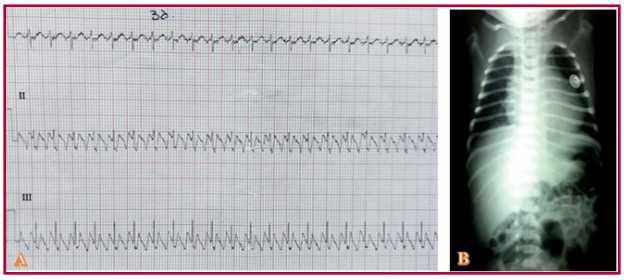

Fig. 2. A. ECG shows atrial flutter with a 2:1 conduction pattern, evidencing the typical saw-tooth P-wave pattern. **B.** Chest teleradiography: Cardiothoracic ratio was 63%, indicating mild cardiomegaly.

Fig. 2. ECG: In sinus rhythm after the second electrical cardioversion.

ECG, and was discharged on oral propranolol therapy for 3 months.

The prognosis of AFl depends on the occurrence of congenital heart diseases and on the response to cardioversion; therefore, babies with healthy hearts have little likelihood of recurrence, and drug treatment for long periods is discouraged. However, those patients with refractory flutter and structural anomaly often receive beta-blockers, or digoxin and beta-blockers, for at least 6 months. (2-4) Our patient did not present with structural heart disease but systolic dysfunction that was overcome. Cardioversion for neonatal AFl with only 0.25-0.5 J/kg is often successful, with a success rate of about 90%; (5) our patient underwent two electrical cardioversions despite continuous amiodarone infusions to restore sinus rhythm, which proved to be safe for the baby, since up to four electrical cardioversions can be performed at 1 J/kg in refractory cases. (5) Fetuses and neonates with AFl or ectopic atrial tachycardia are more likely to be macrosomic than the general population, (6) as was the case of our patient, who was large for his gestational age (weight > p 90). Differential diagnosis should consider infectious diseases, metabolic disorders, and other common arrhythmias in this age group, such as supraventricular tachycardia.

Conflicts of interest
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Transcaval Transcatheter Aortic Valve Replacement

Transcatheter aortic valve replacement (TAVR) is currently the strategy of choice in high-risk or inoperable patients, (1, 2) and it is a valid alternative in intermediate-risk patients, (3, 4) particularly when it can be performed via the femoral artery (V). This access has been the most used and is currently the first choice, added to the reduction of the caliber in the devices for this route. However, there are still some cases in which it cannot be used, and alternative accesses are necessary. The transapical access is one of these alternatives, which, in addition to being more aggressive, showed worse results than the femoral route in some cases. This led to other options such as the transaortic, subclavian, and carotid routes that require surgical access, and, more recently, the percutaneous transaxillary access, and the transcaval access.

All of them have their advantages and disadvantages -as well as their detractors, and a complete summary exceeds the interest of this brief letter, which is to report our first case of percutaneous transcaval TAVR following the minimalist technique, under conscious sedation and without transesophageal echocardiography (TEE).

We describe the case of a highly symptomatic patient with severe aortic stenosis who was rejected for surgery and was indicated TAVR, since the femoral access was contraindicated due to severe peripheral