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окклюдер, радиочастотная абляция, дефект межпредсердной перегородки, оперативное лечение

REMOVAL OF THE OCCLUDER IN A PATIENT WITH ATRIAL SEPTAL DEFECT. CASE FROM PRACTICE

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Abstract

The article presents the case of installing the occluder into the atrial septal defect, after which becomes frequent the attacks of ventricular premature beats and paroxysmal tachycardia, which cannot be stopped by drug therapy and radiofrequency ablation. The problem was solved by surgical treatment - removal of the occluder and closure of the atrial septal defect with a patch from the autopericardium. The surgical method for certain locations of the atrial septal defect is fundamental in the treatment of this pathology. This clinical case demonstrates the ability to perform such operations with a good result.

Жүрекше аралық қалқа ақауы бар науқастан окклюдерді алып тастау. Тәжірибеден алынған оқиға

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Аңдатпа

Мақалада жүрекше аралық ақауға окклюдер орнатқаннан кейінгі жағдай қарастырылған: қарыншалық экстрасистолалар ұстамасы және ұстамалы тахикардия жиіленіп, дәрілік терапия және радиожилілікті абляция арқылы тоқтату мүмкін емес. Бұл мәселенің шешімі оталық емдеу арқылы жүзеге асты — окклюдерді алып тастау және аутоперикардпен жамау арқылы жүрекше аралық қалқа ақауын жою. Жүрекше аралық қалқа ақауының белгілі бір жерін хирургиялық әдіспен емдеу — бұл патологияны емдеудегі негізгі әдіс. Осы клиникалық жағдай мұндай операцияларды сәтті жүргізіп, оң нәтижелерге жету мүмкін екенін көрсетеді.

Удаление окклюдера у больной с дефектом межпредсердной перегородки. Случай из практики

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Аннотация

В статье представлен случай установки окклюдера в дефект межпредсердной перегородки, после которого участились приступы желудочковой экстрасистолии и пароксизмальной тахикардии, не купирующиеся лекарственной терапией и радиочастотной абляцией. Решение проблемы помогло оперативное лечение — удаление окклюдера и закрытие дефекта межпредсердной перегородки заплатой из аутоперикарда. Хирургический метод при определенных расположениях дефекта межпредсердной перегородки является основным в лечении данной патологии. Данный клинический случай демонстрирует возможность выполнения подобных операций с хорошим результатом.

Background

Atrial septal defect is related to congenital heart disease and, according to different authors, is 10–15%. The last decades have been actively implemented endovascular closure of this pathology by occluders. In order to avoid complications, such as deformation of the heart valves, closure of the coronary sinus, occluder dislocation, this manipulation requires a specific location of the defect with the nearby structures of the heart, its size [1-8]. Deviation from these requirements may lead to a malfunction of the heart valves, to the development of heart rhythm disorders. Surgical closure of the atrial septal defect allows to avoid these complications.

Clinical case

Patient B, 33 years old, was admitted to the cardiac surgery department of our center on 12.04.2018.

Complaints at admission to shortness of breath during exercise, interruptions in the work of the heart, attacks of tachycardia, fatigue, general weakness.

Anamnesis morbi: Congenital heart disease, atrial septal defect 1.6 x 1.9 cm in size diagnosed in 2013. In the same year, an endocardial endovascular closure of the defect was performed with occlude Occlutech No.24 in the cardiac surgery center. In the postoperative period, the patient noted an increase in tachycardia attacks, in the flesh until he lost consciousness, increased shortness of breath, weakness. The patient is diagnosed: "Heart rhythm disorder. Ventricular extrasystole IV b graduation on the Luna". In the cardiac surgery center of April 28, 2014, September 12, 2014, and of October 6, 2017, an electrophysiological study and radiofrequency ablation were performed. Unfortunately, there was no improvement in the state of health of the patient.

External evidence: performance status of the patient at admission is estimated as moderate severity, due to the underlying disease. The skin and visible mucous membranes of normal color. Vesicular breathing in the lungs. RR 18 per minute. With auscultation of the heart tones are muffled, clear. The rhythm is correct with heart rate = 94bpm., ABP - 130/80 mm Hg. The liver at the edge of the costal arch, painless on palpation. Edema on the lower limbs no.

Conducted laboratory studies within normal range.

ECG 12.04.2018: The normal position of the electrical axis of the heart. Sinus rhythm. HR 94 bpm. Partial blockade of the right bundle of His. Dystrophic changes in the myocardium.

Echocardiography 12.04.2018: Tricuspid valve - regurgitation of I degree. Left ventricle: EDD 5.1 cm, ESD 3.3 cm, EDV 126 ml, ESV 46 ml, SV 80 ml,

EF 62%. Atrial septum: occluder is usually located, there is no reset. Right atrium: 4.8x4.1 cm. Right ventricle: RVSP 32-35 mm Hg. TAPSE 2.4 cm.

The patient is diagnosed with: "Congenital heart disease. X-ray endovascular closure of atrial septal defect with occluder (2013). Radio frequency ablation (04.2014, 09.2014, 10.2017). Supraventricular tachycardia. Extrasystole. Relative tricuspid insufficiency. Pulmonary hypertension. II functional class by NYHA".

The severity of the patient is considered due to the inconsistency of the installed occluder (No. 24) and the size of the defect (1.6 x 1.9 cm).

20.04.2018 an operation was performed in conditions of cardiopulmonary bypass and pharmacocold cardioplegia – "Removal of the occluder of the atrial septal defect. Plastic atrial septal defect patch of autopericardium. Ligation of the left atrial appendage. Tricuspid valve annuloplasty by De Vega".

During the operation after opening the right atrium, it can be seen that the occluder partially overlaps the aperture of the coronary sinus (figure 1).

After removal of the occluder, a defect with a diameter of 1.6 x 1.9 cm was revealed with a lower membranous margin, which is excised (figure 2).

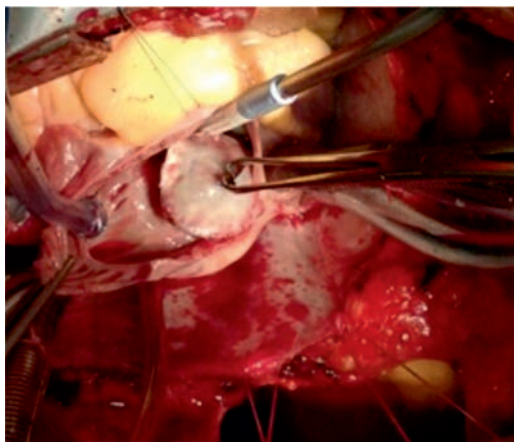


Figure 1.
The occluder partially overlaps the aperture of the coronary sinus

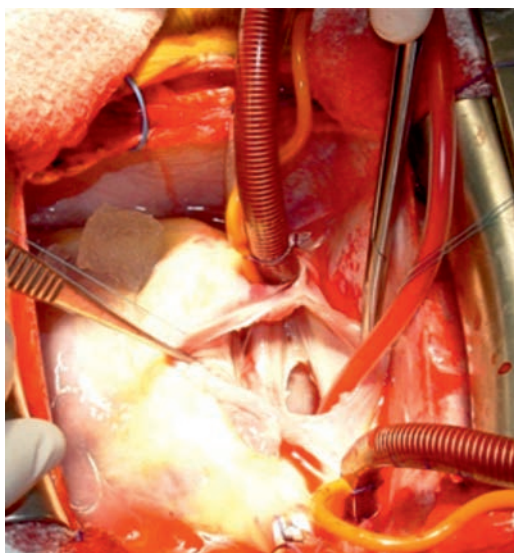
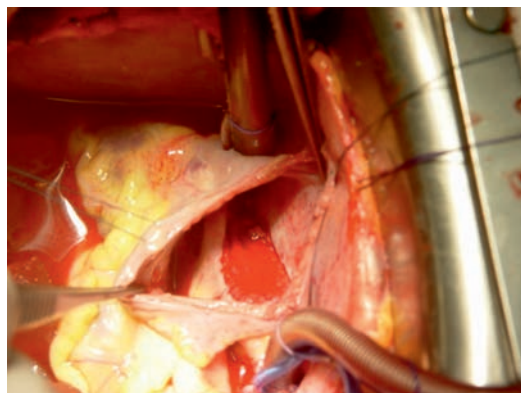


Figure 2.
ASD with a diameter of 1.6 x 1.9 cm was revealed with a lower membranous margin

Figure 3.
ASD is closed by a patch
from an autopericardium



The defect is closed by a patch from an autopericardium, ligation of the left atrium appendage, an annuloplasty of the tricuspid valve according to de Vega is performed (figure 3).

The postoperative period proceeded according to the severity of the operation.

At the time of discharge, the patient's condition is satisfactory. Conscious, adequate. The skin is a normal color. Vesicular breathing in the lungs, no wheezing. Heart sounds are clear, sonorous. ABP 120/70 mm Hg., HR - 80 bpm., the rhythm is

correct. The abdomen is soft, painless, there is no swelling in the lower limbs. Postoperative wound heals by primary intention.

ECG 24.04.2018: Sinus rhythm. HR 80 bpm. The normal position of the electrical axis of the heart. Partial blockade of the right bundle of His. Dystrophic changes in the myocardium.

Echocardiography 05.02.2018.: EDD-4,8 cm, ESD-3,1cm, EDV -110 ml, ESV-37 ml, EF-65%. IAS: patch sewn tightly, no reset. RVSP-23 mm Hg. TV: no regurgitation. TAPSE-1.5 cm.

On the 10th day, the patient in satisfactory condition was discharged home.

Conclusion

Consequently, endovascular closure of septal defects with occluders, without taking into account the anatomical features of the patient's heart, can lead to disruption of the heart valves, to the development of cardiac arrhythmias. Surgical closure of the atrial septal defect allows to avoid these complications, as well as to correct the associated pathology, such as tricuspid valve insufficiency.

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