

Mechanical valve thrombosis during pregnancy
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Introduction

Pregnancy causes changes in cardiovascular system (increase in blood volume and cardiac output, reduction in systemic vascular resistance and blood pressure and increased risk of thrombotic events (hypercoagulability due to increased concentration of coagulation factors and diminished fibrinolysis).

Hemodynamic changes during pregnancy, which are normal in all pregnant women, may exacerbate underlying cardiac disease. Physiological changes in pharmacokinetics of drugs make adjustments of anticoagulant drugs doses very important. In order to prevent these complications adequate anticoagulation is very important.

In pregnant women with mechanical prosthetic heart valves one of the most important changes is the increased risk for thromboembolic events.

Case report

We present a case of a pregnant women with aortic valve thrombosis at 10 weeks of gestation who was successfully treated with parenteral anticoagulant therapy.

Introduction:

In pregnant women with mechanical prosthetic heart valves one of the most important changes is the increased risk for thromboembolic events.

Case report:

We report a case of nonobstructive aortic prosthetic valve thrombosis in early pregnancy. The patient was successfully treated with unfractioned heparin.

Conclusion:

Our case is an example of the successful use of unfractionated heparin in a pregnant women with nonobstructive mechanical valve thrombosis. With this case we review the treatment of prosthetic valve thrombosis during pregnancy, and prevention (with oral and parenteral anticoagulant therapy) according to 2017 ESC/EACTS guidelines for the management of valvular heart disease.
ings were confirmed on transoesophageal echocardiography. Fetal echocardiography showed normal gestation, as gynecological controls. At the middle of March when she was switched to OAC therapy with acenocoumarol and when, the lowest gradient was 54/29 mmHg she was discharged. At the beginning of the IX month of pregnancy, in June 2015, she was admitted to Obstetrics and gynecology clinic, for switching to UFH. After that she underwent an elective cesarean section and delivered a healthy baby. After delivery OAC was started. Both mother and baby were discharged from hospital in a good clinical condition. Control echocardiogram in November 2017 showed pressure gradient across the aortic valve 57/39 mmHg (PG/MPG), AR 1+, MR 1-2+ and normal dimension of heart structures. In the follow up period of 2.5 years she is well, on OAC therapy, INR is in therapeutic range.

**Discussion**

Pregnancy in women with prosthetic valves is associated with increased maternal risk and the risk for the baby. In women with a mechanical heart valve it might be associated with a high risk for maternal and foetal complications: mother mortality in 1-4 % and other complications in up to 40 % cases. That is the reason why women with the family, before planning pregnancy, should be informed in detail. Women also, before planning pregnancy, if prosthetic valve in unavoidable be -
The same regimen for the first several weeks of pregnancy was used in our patient but without strict control od anti Xa which resulted in non obstructive valve thrombosis. According to guidelines for non-obstructive mechanical prosthetic valve thrombosis without previous adequate anticoagulant therapy we optimized anticoagulant therapy with UFH. This resulted in decreasing pressure gradient across the prosthetic valve, pregnancy was well terminated and healthy baby was born by caesarean delivery. In the follow up period of 2.5 years both mother and the baby are well.

In our case a course of OAC therapy with UFH was effective without complications. Our case is a good example of the successful use of UFH in a pregnant women with nonobstructive mechanical valve thrombosis.

**References**

Tromboza veštačke valvule tokom trudnoće
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Uvod: Jedna od najvažnijih promena kod trudnica sa mehaničkim veštačkim srčanim valvulama je povećani rizik od tromboembolijskih događaja.
Prikaz slučaja: Prikazujemo slučaj neopstruktivne tromboze veštačke mehaničke aortne valvule u ranoj trudnoći. Pacijentkinja je uspešno lečena nefrakcioniranim heparinom.
Zaključak: Ovaj slučaj je prikaz uspešne primene nefrakcioniranog heparina kod trudnice sa neopstruktivnom trombozom mehaničke veštačke aortne valvule. Uz prikaz slučaja izložen je i pregled lečenja tromboze veštačkih srčanih zalistaka u trudnoći i prevencija (oralnom i parenteralnom antikoagulantnom terapijom) prema 2017 ESC/EACTS vodiču za lečenje valvularnih bolesti srca.

Ključne reči: mehanička valvula, tromboza, trudnoća