Preface

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This special issue on "Healing Mother's Heart—Cardiac Lesions in Pregnancy" is required mainly due to increasing incidence of complicated pregnancies along with increase in maternal age of index pregnancy. Not only is there increased incidence, but there is also a subsequent development of cardiovascular and other events in these high-risk pregnancies. In addition, recent European Society of Cardiology (ESC) 2018 guidelines on "heart disease during pregnancy" have stimulated us to give details about these disorders in this issue.

In this special issue, the authors focused on the high-risk pregnancies (like eclampsia-preeclampsia, valvular heart diseases, thromboembolic diseases, etc.) that required a pregnancy heart team approach. All these articles mention not only the routine diagnosis and management by the pregnancy heart team but also pathophysiology of these complicated pregnancies, so that new modalities of management can be thought of.

Modified World Health Organization (mWHO) classification of maternal cardiovascular risk is used to classify women with cardiac diseases into four grades (1–4), and prepregnancy counseling is required for them. The ideal time to prevent long-term complications of pregnancy is the time of indexed pregnancy itself and immediately following delivery.

The major changes in the 2018 recommendations, when compared with 2011, are for patients with mitral stenosis with mitral valve area < 1 cm^2 requiring intervention before pregnancy. Separate recommendations for women requiring low and high doses are for vitamin K antagonist (VKA) use during the second and third trimesters. For supraventricular tachycardia (SVT) and Wolff-Parkinson-White (WPW) syndrome, flecainide or propafenone doses are recommended and sotalol is removed. Catheter ablation is upgraded from IIb to IIa in drug-refractory SVT. Magnetic resonance venography is recommended to diagnose venous thromboembolism (VTE) instead of D-dimer. Low-molecular-weight heparins (LMWHs) are the drug of choice instead of unfractionated heparin (UFH) for prevention and treatment of VTE. Dose adjustment of UFH or LMWH within 36 hours is now recommended by testing activated partial thromboplastin time (aPTT) or anti-Xa levels. Decision making based on former Food and Drug Administration (FDA) categories is no longer recommended (IIIC). "Prepregnancy surgery" is now deleted. In Turner's syndrome for aortic diameter, corrected for body-surface area (BSA) is included.

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Some new recommendations are added in 2018 guidelines. Right heart catheterization is recommended to confirm the diagnosis of pulmonary arterial hypertension (PAH) with precaution (1C). LMWH in therapeutic dose is recommended in pregnant patients with chronic thromboembolic pulmonary hypertension (1C). In patients with pulmonary embolism, thrombolytic therapy is recommended only in severe hypotension or shock (1C). In women considering pregnancy and requiring heart valve surgery, choosing the prosthesis in consultation with a pregnancy heart team (IC) is recommended. In treatment-naive pregnant PAH patients, initiating treatment should be considered (IIaC). In patients with (history of) aortic dissection, cesarean delivery should be considered (IIaC). β-Blocker therapy throughout pregnancy should be considered in women with Marfan's syndrome and other heritable thoracic aortic diseases (IIaC). Induction of labor should be considered at 40 weeks' gestation in all women with cardiac disease (IIaC). In patients with peripartum cardiomyopathy (PPCM), bromocriptine may be considered to stop lactation and enhance recovery (left ventricular [LV] function) (IIbB). Pregnancy is not recommended in patients with vascular Ehlers-Danlos syndrome (IIIC). Breast-feeding is not recommended in mothers who take antiplatelet agents other than low-dose aspirin (IIIC).

New concepts in 2018 guidelines include enforcing mWHO classification of maternal risk; introduction of the pregnancy heart team; more attention for assisted reproductive therapy; introduction of specific levels of surveillance based on low, medium, or high risk for arrhythmia with hemodynamic compromise at delivery; new information on pharmacokinetics in pregnancy; perimortem cesarean section; advice on contraception; and the termination of pregnancy in women with cardiac disease.

This special issue in IJCDW may be helpful to both obstetricians and cardiologists to treat a complicated pregnant woman, who is the most important person in her family and is also in prime time of her life, so that the woman can have a successful and safe delivery. In addition, how to follow these high-risk pregnant women subsequently to prevent the anticipated complications later in their life is also discussed in depth. We want to exemplify what is told in the different topics in this issue through the original articles and case reports even though they are less in number.

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