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Letter to the Editor

Reply to Letter to the Editor titled: A well validated risk stratification index predicts poor maternal and fetal outcomes

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This letter is in response to the letter by Guner et al of our article titled "Maternal and fetal outcomes in pregnant females with rheumatic heart disease" published in Indian Heart Journal in the March-April 2021 issue. We sincerely appreciate the interest of Guner et al in our study, and we welcome the queries raised by them regarding this study.

There are various scoring systems and risk stratification tools available to predict the likelihood of maternal adverse cardiac events during pregnancy and postpartum. These scores are predominantly evaluated in the western population, with less than one-third study population comprising of rheumatic heart disease. The CARPREG I score developed by Siu et al and validated in various studies comprises of 4 predictors (Prior cardiac event (heart failure, transient ischemic attack, infarction prior to pregnancy or arrhythmias; NYHA functional class at baseline > II or cyanosis; left heart obstruction (mitral valve area <2.0 cm2; aortic valve area <1.5 cm2; and LV outflow tract gradient > 30 mm Hg) and reduced systolic ventricular function (ejection fraction < 40%)) having equal weightage of 1 point for each variable.[1,2] Pregnant women are classified as CARPREG 0, 1, or > 1 in the presence of none, one, or more than one defined risk factor. The percentage of complications increases as the number of risk factors increases. Applying this score in our patient group categorized 3.7% in score 0 group, 35% in score 1 group, 53% had score 2, and only 7.5% had a score of 3. The adverse event occurred in 0%, 17.8%, 48.9% in patients with CARPREG score of 0, 1, and >2, respectively. The score mentioned above by Guner et al is CARPREG II score which was not analyzed in our study.[3] As mentioned in limitation of our study, the number of patients included was small and larger studies are needed to assess the predictors of maternal and fetal outcome in RHD pregnant females.

Pregnancy after prosthetic heart valves (PHVs) is considered high risk for both mother and child. During pregnancy, there is a thrombogenic state with pregnancy-induced procoagulant status, which increases the risk of PHV thrombosis and increased risk of fetal loss in patients on anticoagulant.[4] The anticoagulant regime followed in our study is mentioned in the methodology section. There were 20 PHV patients, out of which 4 underwent spontaneous/induced abortion. 2 patients of PHV on warfarin had warfarin embryopathy for which they underwent induced abortion. Out of 16 PHV patients, 7 were switched from warfarin to UFH during 6–12weeks of gestation. In the remaining 9 patients of PHV, switching of warfarin to UFH was not possible due to the inability to maintain target APTT or the patient's preference to continue with warfarin. The maximum dose of warfarin in this group was < 5 mg. Strict monitoring of INR was done in all patients every 2 weekly. No patient was switched to LMWH. Transesophageal echocardiography (TOE) was planned to perform if there was any significant change in a gradient across the PHV and/or symptomatic class worsening. No patient showed any significant change in a gradient across PHV on transthoracic echocardiography, so TOE was not performed in any patient during follow-up. 2 adverse events of induced abortion due to warfarin embryopathy and no adverse event of prosthetic valve thrombosis or bleeding were found in our study. This study showed that a multidisciplinary approach and strict monitoring, and regular follow-up could improve the maternal and fetal outcomes in pregnant females with PHV.

Declaration of competing interest

No grant, contracts or other form of financial support has been taken. There is no relationship relevant to the contents of this paper to disclose and no conflict of interest.

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