LETTER TO THE EDITOR

To the Editor — Maternal inappropriate sinus tachycardia during pregnancy

Shah and colleagues[1] presented 11 patients with maternal inappropriate sinus tachycardia (IST) during pregnancy. Two major points are worth considering.

First, the authors used a definition for IST consistent with the 2015 Heart Rhythm Society expert consensus statement.[1,2] This included a resting heart rate >100 beats/min and an average heart rate >90 beats/min on 24-hour monitoring. Yet, heart rate criteria were derived from nonpregnant individuals. In healthy pregnancy, heart rates >100 beats/min have been observed in more than 10% of subjects from 18 weeks of gestation.[3] Some have suggested that a threshold of 100 beats/min is too low for the upper limit of normal in pregnancy.[4] Maternal IST during pregnancy requires a modification to the present definition. Maintaining the present diagnostic criteria will likely result in overdiagnosis.

Second, effectiveness and safety of metoprolol succinate remain questionable. Lifestyle modifications, such as increased fluid intake for volume expansion, are often recommended for IST.[2] These alone may improve symptoms. Generally, the performance of β-blockers for IST in nonpregnant patients is considered underwhelming.[5,6] Moreover, although metoprolol is regarded to be one of the safer β-blockers for use during pregnancy, one study reported low birth weight (<2500 g) in 13.3% of infants with intrauterine exposure to metoprolol compared with 5.2% in nonexposed control subjects.[7] There should be caution when considering dose escalation of metoprolol succinate.

As cardiac electrophysiologists become involved in developing cardio-obstetric teams, it is prudent to be aware that many diagnosis and treatment patterns for nonpregnant patients may need to be adjusted for pregnant patients.

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Authorship

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