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External Cardioversion of Supraventricular Tachycardia in Omphalo-Thoracopagus Conjoined Twins.

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A pair of omphalo-thoracopagus twins was diagnosed with supraventricular tachycardia (SVT) on the first day of life. Twelve-lead electrocardiography was performed with leads placed on twin A (Figure 1). The 2:1 ratio of the 2 QRS populations was thought to be the result of SVT in twin

**Figure 1** ECG of Supraventricular Tachycardia

Two QRS populations are seen with a cycle length of 250 ms in twin A (up-going arrows) and 500 ms in twin B (down-going arrows).

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All authors attest they are in compliance with human studies committees and animal welfare regulations of the authors’ institutions and Food and Drug Administration guidelines, including patient consent where appropriate. For more information, visit the *JACC: Clinical Electrophysiology* author instructions page.

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A, with 1:1 conduction between the 2 atria and 2:1 conduction at the level of the atrioventricular node of twin B. Intravenous adenosine (0.1 and 0.2 mg/kg) was given without success. External cardioversion was performed with defibrillation patches placed on the back of each neonate (Figure 2). The thoracopagus anatomy precluded anteroposterior placement of defibrillation patches. A synchronized shock of 6 J successfully restored normal sinus rhythm (Figure 3A). Repeat 12-lead electrocardiography after cardioversion showed 2 different populations of P and QRS waves with identical heart rates (Figure 3B). We concluded that the twin with the faster sinus rate was driving the rate of the second twin through a connection at the atrial level. The imaging studies, including contrast-enhanced computed tomography, revealed a complex relationship of the 2 hearts (Figure 4).

Electrocardiographic recording of thoracopagus twins has been rarely reported (1,2). SVT has been previously reported in thoracopagus twins, with successful ablation of the accessory pathway in 1 of the twins (3). Because this is an extremely rare occurrence, we present here the 12-lead

![Defibrillation Patch Placement](image1)

The thoracopagus twins with defibrillation patches placed in a “back-to-back” configuration.

![Cardioversion of SVT and ECG During Sinus Rhythm](image2)

(A) Termination of SVT with direct current shock. (B) 12-Lead ECG during sinus rhythm with insert showing the 2 sets of P and QRS waves. Down-going arrows show the P and QRS waves of twin A and up-going arrows show the P and QRS waves of twin B.
Electrocardiogram of thoracopagus twins during SVT and during sinus rhythm. We also report successful cardioversion with back-to-back placement of defibrillation patches in thoracopagus twins for the first time.

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**References**


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