Hemodynamically significant ductus arteriosus and bronchopulmonary dysplasia

To the Editor:

We read with interest the article by Schena et al regarding the association between hemodynamically significant patent ductus arteriosus and bronchopulmonary dysplasia (BPD).[1] They concluded that a significantly greater percentage of infants with BPD had a patent ductus arteriosus for more than 1 week and a hemodynamically significant ductus arteriosus (HSPDA) for at least 1 week. Different scoring systems for the prediction of BPD have been developed.[2,3] In a recent report that we published,[4] we had shown that a HSPDA, defined as a ductal diameter more than 1.6 mm, growing or pulsatile ductus flow from left to right, reversal of flow in the descending aorta, and reversal or absence of blood flow in the organ vessels was the most significant contributing factor to the development of BPD. This definition of HSPDA is similar to the E3 and E4 stage, proposed by McNamara and Sehgal[5] and used in this study. In the scoring system that we developed, which included birth weight, gestational age, presence of respiratory distress syndrome, hypotension, sex, intraventricular hemorrhage, and HSPDA, the presence of HSPDA owed 3 points to the total score, in which a score between 7 and 9 predicted the development of BPD in 81.2% of cases. Therefore it was the greatest contributing factor for the development of BPD. We believe that there is a strong association between a HSPDA and the development of BPD. Close hemodynamic monitoring is essential during the management of these infants. If there is a HSPDA, the risk of developing BPD is high and medical treatment of BPD may be considered early in the course of the disease.

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