

Patent ductus arteriosus ligation in low birth weight premature: risk of transport

To the editor,

I have read the article of Vuran et al.(1) with the title of "Follow-up results after surgical treatment and operation in 20 low birth weight premature babies whose patent ductus arteriosus ligations were performed by one-day surgical intervention" with interest. Patent ductus arteriosus which is one of the most common morbidities observed in preterm babies can lead to secondary problems including congestive heart failure (CHF), bronchopulmonary dysplasia (BPD), necrotizing enterocolitis (NEC) and intracranial bleeding (ICB) during follow-up. Therefore, urgent treatment is required in cases where laboratory investigations show the severity (2,3). Especially in cases who do not respond to drug therapy (indomethacin, ibuprofen), surgical treatment seems to be the best option (3). However, it is known that inter-hospital transport is a cause of severe intracranial bleeding in low and very low birth weight babies (4,5). In the study performed by Mohamed et al.(4), the rate of ICB was found to be 27.4% in patients transported from external centers, while this rate was found to be 13.42% in low birth weight patients born in the same hospital (OR 1.75 (%95 CI 1.64-1.86; p<0.001). When it is considered that the surgical option of Vuran et al.(1) includes transportation of the patients from an external hospital and retransportation to the same hospital, it may be proposed that the risk can increase two fold.

On the other hand, it was reported that patients with low birth weight and very low birth weight should be followed up in a neonatal intensive care unit of IIIa-IIIb level in the article published by the American Pediatric Academy in 2004 titled "levels of neonatal intensive care units" (6). It was stated that especially PDA ligation is required to be performed in a neonatal unit of IIIb level (6). Thus, a cardiovascular surgery unit should be included in a neonatal intensive care unit of IIIa-IIIb level where such low birth weight preterm babies are followed up.

When appropriate conditions can not be provided (for example, in NICUs which do not include a cardiovascular surgery unit), bed-side PDA closure is one of the surgical options for surgical treatment of PDA (7,8). Bed-side ligation was shown to decrease complications related to transport and ventilator (7,8).

Conclusively, although one-day surgical PDA ligation is considered as an option, one should be cautious in terms of mortality and even morbidity, when ideal conditions can not be provided for NICUs. Bed-side PDA ligation should be kept in mind as another method which can be performed in low birth weight and very low birth weight babies followed up in the NICU where appropriate conditions can not be provided.

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