

NEW PERSPECTIVES ON LENTICULOSTRIATE VASCULOPATHY IN NEONATES

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Lenticulostriate vasculopathy (LSV) is a sonographic term given to branching hyperechogenic lines in the basal ganglia and /or thalamus seen on cranial ultrasound scans. LSV was first described on a neonatal cranial ultrasound in 1985, but the clinical importance, relevance to congenital infections, and long-term consequences of LSV on neonatal cranial ultrasound continues to be unclear. The incidence of LSV being reported has increased recently, which might reflect nothing more than a growing awareness of this finding on neonatal cranial ultrasound. On the other hand, improved ultrasound imaging technology may have enhanced identification, and there may be an increase in the frequency of risk factors contributing to the presence of LSV. We suspect that improvements in US technology have enhanced the visibility of the arterial walls in the supratentorial deep gray matter. Thus, thin and faint lenticulostriate vessels that are seen on neonatal cranial US using contemporary technology may not necessarily be pathological. This review on LSV provides an update of current knowledge, with emphasis on definition and challenges that might have evolved with establishing the diagnosis during the last three decades. It has been accepted that lenticulostriate arteries supplying the deep gray matter are not normally visualized on the cranial ultrasound. For the first time in the literature, we challenged this notion in light of the recent technological advances in ultrasound imaging that have enhanced ultrasound imaging. Conflict still exists in terms of the clinical importance and long-term outcomes of LSV since the first case reported three decades ago. In this article, we also scrutinized the available evidence on clinical correlation of this neonatal ultrasound finding, discussed long-term outcomes, and provided strategies that may guide practitioners in clinical settings.

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