Migraine occurs in about 15% of the pediatric population, with approximately one-third of cases associated with an aura. Patent foramen ovale (PFO), a normal fetal connection between the atria allowing blood from the placenta to bypass the lungs, has been implicated in the pathogenesis of migraine. Agitated saline solution contrast echocardiographic studies and autopsy reports have found that the foramen ovale remains patent in 10%-25% of the general population, and most studies of adults with migraine with aura have found a significantly higher prevalence of PFO ranging from 41%-62%. Because PFO is so prevalent in adults with migraine with aura, experts have hypothesized that a right-to-left shunt across the atrial septum allows metabolic or microembolic triggers which would normally be cleared by the lungs to pass unfiltered into the cerebral circulation, leading to the migraine. Studies exploring the effectiveness of PFO closure on the frequency and severity of migraine headaches in adults however, have had conflicting results. A recent study by McCandless et al. sought to determine whether PFO was also prevalent in children with migraines with aura because no such connection had been examined in children. A total of 109 children 6 to 18 years of age diagnosed with migraine by the pediatric neurologists at Primary Children’s Medical Center were evaluated during this study. Of these children 38 experienced migraine with aura and 71 experienced migraine without aura. Color-flow Doppler scanning, saline solution contrast transthoracic echocardiography, and contrast transcranial Doppler scanning were used to evaluate whether PFO and right-to-left shunting were present in the patients. It was found that of the 109 children studied 35% exhibited PFO which is similar to the 25% prevalence in the general public. Of the children who experience migraine with aura 50% exhibited PFO, which indicates a statistically significant difference from the general public. This data led researchers to conclude that children with migraine with aura have a significantly higher prevalence of PFO compared with those without aura or the general public. The study suggests that PFO may contribute to the pathogenesis of migraine with aura in children and as such may have implications for clinical decision making.