**TWO-FOR-ONE! Today, 2 pieces on the same research study, but from 2 different media sources on April 16:**

**PIECE ONE:**

Prepared by Sam Wittekind, MD based on a ***Seattle Times*** article titled, “Colic may be linked with migraines, research says” <http://seattletimes.com/html/health/2020790995_apusmedcolicmigraines.html>

All babies fuss, and this behavior is explained by most pediatricians as a normal phase of infant development.  However colic occurs in approximately 20% of US infants and causes frustration for families and pediatricians.  Presumably such infants are in pain, and the negative impact on the family can be significant.  The cause remains unknown.  Much research has focused on gastrointestinal causes such as gassiness, disturbances in bacterial flora, and more recently *H. pylori*.  There have been some promising leads, but no truly impactful developments.

This newspaper article draws attention to a recent study published in *JAMA* that demonstrates an association between infantile colic and migraine headaches later in childhood.1  This multicenter, case-control study was conducted in Italy and France.  Parents of patients age 6 to 18 years treated for migraine (n=208) in the ED and a control group without migraine disorder treated for minor trauma (n=471) were asked if they had colic as infants.  Patients with migraine were interviewed by a pediatric neurologist and the control group was interviewed by a pediatric EM physician.  Children with migraine were more likely to have experienced infantile colic than those without migraine (72.6% vs 26.5%; OR, 6.61 [95% CI, 4.38-10.00]; P < .001).  The authors of the study say that longitudinal studies are needed to further examine this interesting association.  If there is a pathophysiologic link between the two, it has clear implications for the treatment of colic.

Strengths of the featured study include its statistical power and inclusion of a tension headache group that suggests there is something unique about migraines as it relates to colic.  Weaknesses include possible recall bias and response bias, as well as questionable generalizability from only including children with migraine brought to the ED.  The newspaper article itself does a nice job of summarizing the findings.  It also balances science with human-interest content.  For example it closes with the expert opinion of a neurologist, who was not involved in the study, followed by a quote from a frustrated mother with a colicky baby.  In a minor error, the number of patients in the migraine group was misquoted as 200.  Also the weaknesses of the study were not mentioned.

**PIECE TWO:**

# Prepared by Jennifer Maxwell, MS4 based on a *USA Today* article, “Colic in Infants May Be Early Sign of Migraine Headache”

# [www.usatoday.com/story/news/nation/2013/04/16/colic-migraine-infants/2086121/](http://www.usatoday.com/story/news/nation/2013/04/16/colic-migraine-infants/2086121/)

# The salient points of the study include 76% of those surveyed with migraines irrespective of presence of aura had colic as an infant compared to children with tension headaches (35%) and those without migraines (26%). Questionnaires were analyzed for 208 children with migraines, 471 children without migraines, and 120 with tension headaches.

# The article also describes another study where mothers with migraines were twice as likely to have babies with colic, implying the strength between the association between migraines and colic. Dr. Andrew Charles, a neurologist from UCLA who was not involved in the study provides commentary that these results may lead to reconsideration of colic as brain-based, rather than as gut-based, emphasizing that colic remains a mystery.

# The USA Today summary is generally accurate but the title may mislead readers to understand colic to presage migraines as an adult, which the study does not address. The study is retrospective and can at most suggest that colic and migraines are correlative, not that one can predict the other. Readers also are not likely to understand selection bias (i.e., this population of emergency department patients may have more severe migraines or health problems than most children in general). The highlight section pairs 20% of infants having colic with a similar 23% of teenagers having migraines. It’s not clear if it was the journalist’s intent to imply an association based on this similarity, but a reader may incorrectly assume such an association.

# Overall, this developing area of study is of broad interest and well-suited to media reporting. Accurate reporting becomes especially important to helping families build interest and attention to care and prepare for their children’s good health without unnecessarily misdirecting them.

**RESOURCE ON COLIC:**

# AAP- Colic *Ages & Stages general information on colic & crying, from HealthChildren.org* [*http://www.healthychildren.org/English/ages-stages/baby/crying-colic/Pages/Colic.aspx*](http://www.healthychildren.org/English/ages-stages/baby/crying-colic/Pages/Colic.aspx)

**JAMA ARTICLE:**

# Original article: Romanello S, Spiri D, Marcuzzi E, et al. Association Between Childhood Migraine and History of Infantile Colic. *JAMA*. 2013;309(15):1607-1612. doi:10.1001/jama.2013.747

# And that’s today’s Developmental & Behavioral Pediatrics: IN THE NEWS!