Birth weight, gestational age, and infantile colic
The Danish National Birth Cohort

Milidou I.1,2, Søndergaard C.1, Jensen MS.1,3, Olsen J.4, Henriksen TB.2
1Department of Pediatrics, Herning Regional Hospital, Denmark
2Perinatal Research Unit, Aarhus University Hospital
3Department of Occupational Medicine, Aarhus University
4Department of Epidemiology, School of Public Health, Aarhus University, Denmark

Background
Infantile colic is characterized by paroxysms of crying and fussing during the first months of life. It affects almost 10% of infants in Western countries and is often a reason for parents contacting the health care system. The etiology of infantile colic is unknown. A few studies identified low birth weight as a risk factor, but most studies included only infants born with normal birth weight (BW). Less is known about gestational age (GA) and infantile colic.

Methods
The population studied was 62,785 singletons enrolled in the Danish National Birth Cohort; 4,944 infants (7.9%) fulfilled Wessel’s modified criteria for infantile colic. Computer-assisted interviews of the mother during pregnancy and post-partum provided information on possible confounders (maternal smoking habits, age, and parity) and on infantile colic symptoms. BW and GA data was retrieved from the Danish Medical Birth Registry.

Results

1. Birth weight and infantile colic
BW was categorized in 500 grams intervals (reference: 3,500-4,000 grams). An increased risk of infantile colic was found with lower BW.

2. Gestational age and infantile colic
GA was grouped in 5 categories (reference: gestational week 40). An increased risk of infantile colic was found with lower GA.

3. Small for gestational age and infantile colic
For each of the five GA groups we compared infants with BW below the 10th percentile to the rest (reference group). Infants small for gestational age had an increased risk for infantile colic if born in gestational weeks 32-40.

4. Birth weight and infantile colic among infants born at term
In a stratified analysis we found that low BW was associated with infantile colic among infants born at term (gestational weeks 37-41) after adjusting for GA.

Conclusion
The results indicate that low birth weight and preterm birth are independently associated with infantile colic. After adjusting for gestational age, low birth weight was found to increase the risk of infantile colic in children born at term (gestational weeks 37-41). Such an association was not found in preterm or postterm infants.

"Infantile colic is defined as paroxysms of irritability, crying and fussing for a total of more than 3 hours per day, for more than 3 days in a week in an otherwise healthy and well-fed infant." Modified Wessel’s criteria

Contact: Ioanna.Milidou@ki.au.dk