PP081
Safety to extensively heated cow’s milk challenge in children with severe cow’s milk allergy
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**Background:** A number of studies have suggested that a large subset of children who react to unheated milk can tolerate extensively heated forms of that food. A diet that includes baked milk products is well tolerated and appears to accelerate the development of regular milk tolerance when compared with strict avoidance. However, the indications for an oral food challenge using baked products have been limited for patients with high specific IgE values or for severe cow’s milk allergy. But few data exist on predictors of outcomes of baked milk challenges.

**Aims:** We evaluated the clinical characteristics and severity of reactions to baked cow’s milk (CM) in children with severe IgE-mediated cow’s milk allergy (CMA) at an oral food challenge (OFC).

**Methods:** A retrospective medical record review was conducted of 24 baked milk challenges, using milk cookies. Specific IgE levels, demographic characteristics, and food challenge results were analyzed. Children with severe cow’s milk allergy (21 with history of CM anaphylaxis) with complete dietary CM avoidance were offered a baked CM OFC. Challenges were performed with incremental dosages to a total of 3 cookies.

**Results:** Twenty-four children with severe CMA underwent a baked CM OFC. Twenty-one patients (87.5%) passed the OFC and successfully incorporated baked CM into their diet. Three (12.5%) reacted to their challenge. Of reactors, two developed anaphylaxis and required intramuscular adrenalin. Compared to those who passed, children who failed the baked milk challenges were younger (median 4.3 years and 7.8 years, respectively). Compared to those who passed, children who failed the baked milk challenges had higher levels of sIgE (median of milk sIgE was 27.87 kU/L and 20.85 kU/L; α-lactoalbumin sIgE 23.25 kU/L and 8.97 kU/L; β-lactoglobulin sIgE 16.59 kU/L and 6.75 kU/L; except casein sIgE 12.78 kU/L and 18.58 kU/L, respectively). The time since the last anaphylactic reaction was similar among children who reacted and passed to the baked OFC (44 months and 46 months, respectively).

**Conclusion:** Most children with cow’s milk allergy tolerated baked milk. Our results showed that history of anaphylaxis do not represent contradiction to a baked CM challenge. Even children with high levels of milk specific IgE can pass in a baked challenge. Given the potential for anaphylaxis, an OFC to baked CM should be done under medical supervision.