

## No particular sequence of events is observed in infants with ALTE and Gastroesophageal Reflux as measured by Impedance.

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The etiology of apparent life threatening events (ALTE) continues to be controversial. Whether gastroesophageal reflux (GER) is cause, consequence or just concurrent is still undetermined. The 24 hr Multichannel Intraluminal Impedance–pH monitoring (MII-pH) enables the study of the quality, acid or non acid and symptom correlation. The analysis of the temporal sequence when this association occurs may be helpful in elucidating this issue.

**Aim:** To determine the **temporal relation between GER episodes and ALTE in a three minute interval** during a 24 hr recording.

**Materials and Methods:** Between March 2005 and May 2009, all former full term infants who presented with an apparent life-threatening event (ALTE) on whom we were consulted, underwent a 24 hr Multichannel Intraluminal Impedance- pH study (MII-pH) using a Sandhill Monitoring Recorder. Exclusion criteria were congenital anomalies, ventilatory support, treatment with caffeine, and/or need for a nasogastric tube. In those in whom an episode of GER occurred within 3 min of one of apnea, the temporal relationship between them was performed to determine if apneas occurred **before, during** or **after** the episode of GER.

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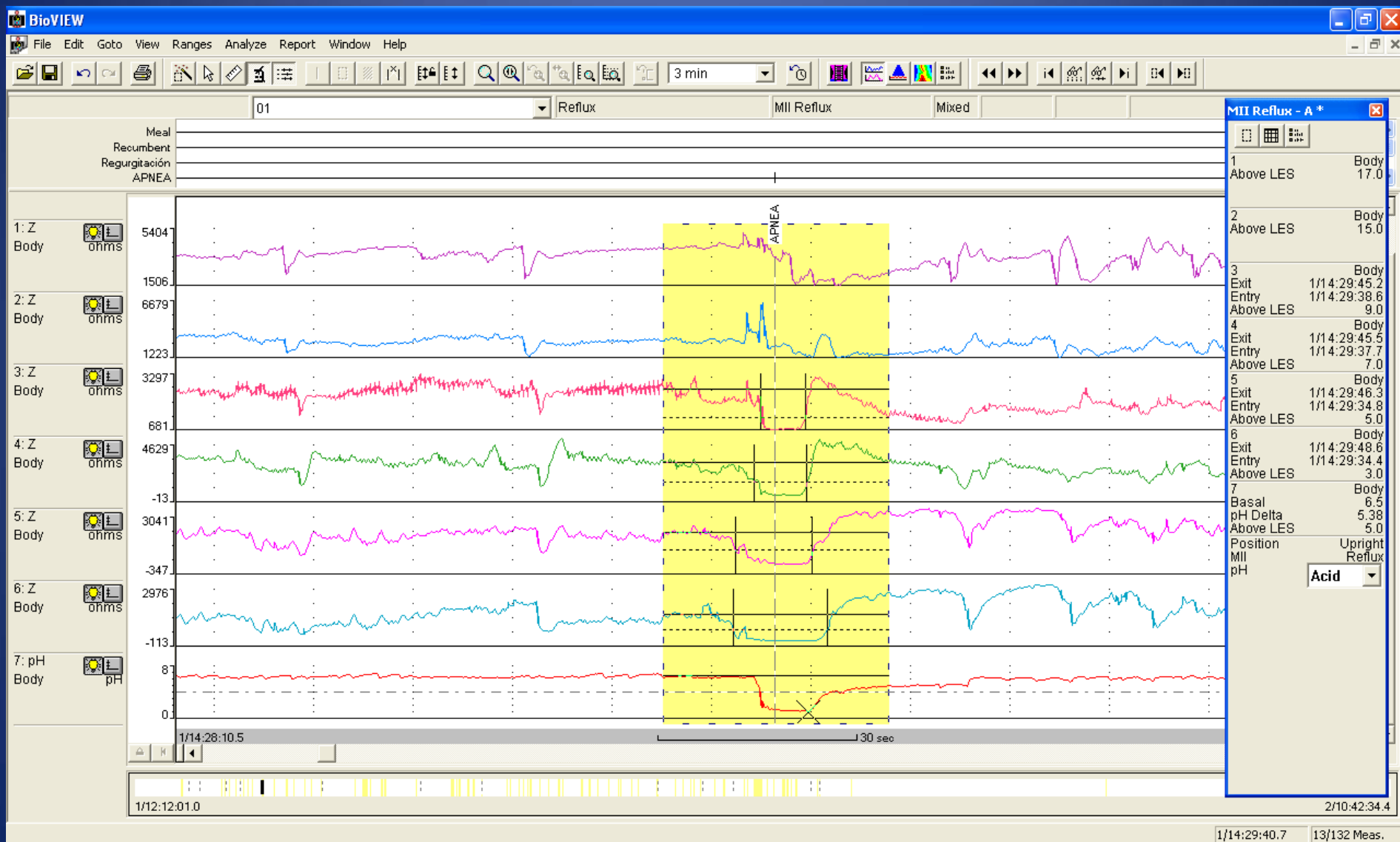
**Results:** Fifty eight infants were evaluated (32 girls), with a median age of 2 months (r1-6 months). A total of 3011 (X: 48.3, r: 13-107) reflux events were observed: 1807 (60%) nonacid (X: 29.5, r 5-105) and 1204 acid reflux (X: 19.4, r 5-43). According to the symptom index (SI): 31 patients were positive with 70 apneas / GER events detected.

The percentage of apneas seen before a reflux episode was **34.2%** (70.8% nonacid), during GER **32.8%** (65.2% nonacid) and after GER **32.8%** (43.4% nonacid). In 18 patients who experienced more than one episode of apnea during the recording, a different temporal relationship with GER was observed at each one.

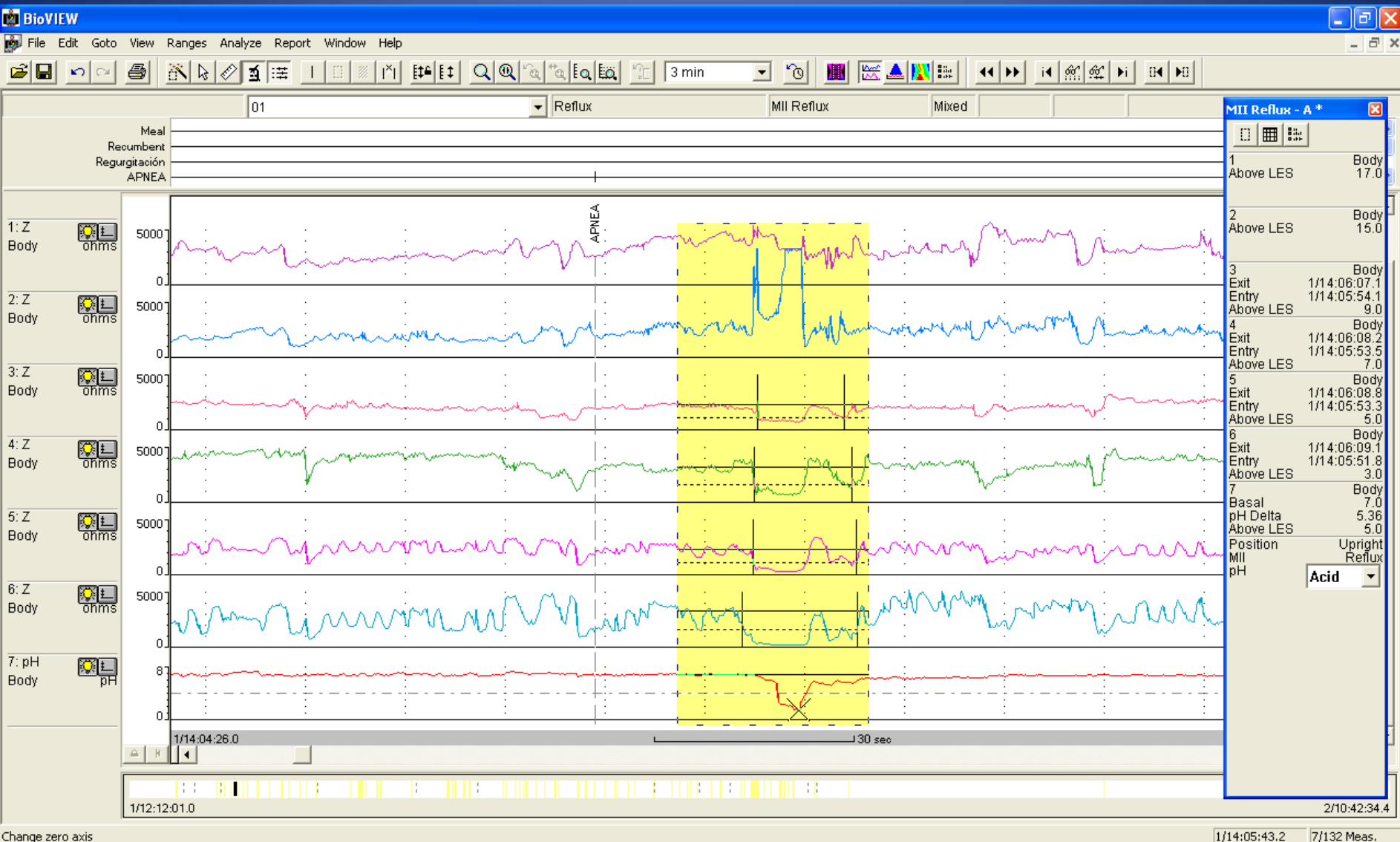
**Conclusions:** In infants in whom a temporal association ( ALTE / GER ) was observed there was no unique pattern in the symptom sequence and in the same patient a different sequence of events could be detected.

This heterogenous behavior may reinforce the theory that GER and ALTE are just concurrent events.

# APNEA DURANTE el episodio de RGE



# APNEA PREVIA al episodio de RGE Acido



# Episodio de RGE No ácido antecede al de Apnea



