CO-015 - MEAN BASAL IMPEDANCE IN GERD DIAGNOSIS BY LYON CONSENSUS – NEW METRIC FOR OLD DISEASE

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Introduction:
In 2018 Lyon consensus were published defining modern criteria for the diagnosis of gastroesophageal reflux disease (GERD). Mean nocturnal basal impedance (MNBI) reflects the permeability of the esophageal mucosa and can be used as an adjunctive measure. However, its role is not clarified and normative values are yet not available.

Methods:
Included patients that performed pH-impedance monitoring (pH-I) for suspected GERD between 2013-2018. MNBI was calculated by measuring mean impedance in the most distal impedance channel from three 10minutes' periods (01:00, 02:00 and 03:00am).
GERD was defined as acide exposure time (AET)>6% or endoscopic evidence of reflux, Funcional Heartburn (FH) as AET<4% and no significant symptom association (SA) and Hypersensitive Esophagus (HE) as AET<4% with SA.
The study aim was to evaluate MNBI as an adjunctive measure for GERD differential between FH and HE.

Results:
We included 216 patients (64% female, mean age 57±15years, 45% typical symptoms, 86% pH-I off therapy).
AET>6% was present in 27%, AET<4% in 62%, and AET 4-6% in 11%. MNBI was correlated with AET ($p<0.001$) and was lower in patients with GERD compared to FH/HE (1366Ω/2530Ω; $p<0.001$). The cut-off value of MNBI to distinguish GERD from FH/HE was 1729Ω (AUC=0,829±0.038; 95%CI, 0.76-0.90; $p<0.001$), with a sensitivity of 81% and specificity of 80%.
Reflux episodes (RE)<40 were present in 35%, RE>80 in 24% and RE 40-80 in 41%. MNBI was correlated with RE ($p=0.018$) and although lower in RE>80, it didn´t reach statistical significance (1920Ω/2305Ω; $p=0.06$).
Symptoms were present in 50% of the patients during pH-I and SA was positive in 30% and negative in 70%. MNBI was not related with SA ($p=0.641$) and did not differ between FH and EH (2653Ω/2589Ω, $p=0.841$).

Discussion:
MNBI is and adjunctive metric that can be helpful in differential between GERD and FH/HE but not between FH and HE.