EUROPEAN HELICOBACTER AND MICROBIOTA STUDY GROUP

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TABLE OF CONTENTS

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Contributions of up to EUR 10.000. -(or equivalent value in kind) per year per entity are considered “Modest”. Contributions above EUR 10.000.-per year are considered “Significant”.

Missing abstracts within the consecutive presentation numbers represent withdrawn papers.

Material and Methods: NLC were produced using Precirol ATO5®, Miglyol-812® and Tween®60 (NLC60)[2]. NLC60 protein corona was analyzed by liquid chromatography-mass spectrometry (MS) and its effect on NLC activity was tested. Fluorescent albumin in solution and in nanoparticles (produced by microfluidics) was tested against Hp J99 and *Escherichia coli* ATCC®25922™ and their interaction was analyzed by imaging flow cytometry.
Results: MS analysis confirmed a protein corona on NLC surface that delays activity against Hp. This protein corona was composed by 70 proteins, being serum albumin the most abundant (>93%). After incubation with labelled albumin, only Hp interacted with this protein. The same was observed for albumin nanoparticles (imaging flow cytometry). When tested against both bacteria no bactericidal effect was observed.
***Conclusion*:** The role of protein corona and albumin in NLC activity and Hp selectivity was demonstrated. These results aid in disclosing NLC selectivity towards Hp, and highlight the role of albumin and the potential of albumin nanoparticles for Hp targeting.

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P05.09

PPI'S EFFECTIVENESS IN H. PYLORI ERADICATION SCHEMES DEPENDS ON THE BASAL SECRETION OF HYDROCHLORIC ACID

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Objective: Sufficient inhibition of HCl secretion is one way to improve the *Helicobacter pylori* (HP) eradication. The aim of the study was to evaluate PPI effectiveness at first day of treatment depending on the HCl basal secretion.
Patients and Methods: We analyzed 83 results of 24-h-gastro-pH-monitoring at day one of PPI taking in patients with acid-dependent gastroesophageal diseases. Primarily we performed express-gastro-pH-monitoring. The separation criterion was established previously by express-gastro-pH-monitoring indicators (X pH >2.48 units, Me pH >2.3 units, Mo pH >2.35 units).
We created two groups comparable by age, sex, height, weight, and prescribed PPI. Group I – 55 patients with indicators less than suggested. Group II – 28 patients with indicators corresponding to the proposed criteria.
We studied 24-h-gastro-pH-monitoring pH indicators (X pH, Me pH, Mo pH) for basal period-time from the start of the investigation to the first PPI dose (1 hour); time after the first PPI dose until the end of monitoring (23 h); night period (22:00-07:00).
Results: The basal period intragastric indicators X pH, Me pH, Mo pH in I group were significantly (p<0.01) lower (1.9±0.09, 1.75±0.07, 1.68±0.07 *vs.* 2.2±0.09, 2.03±0.1, 1.96±0.1). 23 hours after the first PPI dose in group I indicators were significantly (p<0.01) lower (4.2±0.2, 4.07±0.2, 3.6±0.2 *vs.* 4.9±0.2, 4.9±0.3, 4.5±0.3); night period indicators in the group I were significantly (p<0.01) lower (4.3±0.2, 4.2±0.3, 3, 9±0.3 *vs.* 5.03±0.2, 5.02±0.3, 4.9±0.4).
Conclusions: Basal gastric acidity affects PPI acid-blocking action at the first day of treatment during the 23-hour period and night period. The proposed criteria for prognostic PPI acid-blocking effect assessment before treatment are sufficient.

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