

## Chest Infections

**SESSION TITLE:** Chest Infections Posters

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### OVERWEIGHT PATIENTS WITH BRONCHIECTASIS: DOES IT MATTER FOR SPUTUM CULTURE?

KSENIIA SUSKA KATERYNA GASHYNOVA AND VALERIYA DMYTRYCHENKO

**PURPOSE:** It is believed that among patients with bronchiectasis (B), patients with reduced body weight have a more severe course. However, data on the characteristics of the phenotype with increased body weight are not enough today, while obesity has been shown to aggravate other respiratory diseases. The study aimed to determine if there are some features of sputum culture in overweight patients with B.

**METHODS:** 71 stable patients with confirmed B by HRCT were included to the study. Microbiological detection of sputum samples was conducted by conventional bacteriological methods. Weight was measured by "Body composition monitor Omron BF511" for the static weighing and body mass index (BMI) was calculated.

**RESULTS:** The median age was 57 (39;64), 23 were men (32.4%). According to the results of the BMI calculation, the patients were distributed as follows: underweight ( $\leq 18.5$  kg/m<sup>2</sup>) – 5 (7.1%) patients, normal weight (18.5–25 kg/m<sup>2</sup>) – 34 (47.9%), overweight ( $25 < \text{BMI} \leq 30$  kg/m<sup>2</sup>) – 22 (30.9%) and 10 of them (14.1%) had obesity class I ( $30 < \text{BMI} \leq 35$  kg/m<sup>2</sup>). Patients were divided in two groups: G1 – with  $\text{BMI} < 25$  kg/m<sup>2</sup> (n=39); G2 – with overweight and obesity,  $\text{BMI} \geq 25$  kg/m<sup>2</sup> (n=32). G1: 27 patients (69%) expectorated sputum, 14 of them (51.9%) had *Pseudomonas aeruginosa* in sputum culture, five – *Haemophilus influenzae* (18.5%), three – *Staphylococcus aureus* (11.1%), two – *Streptococcus pneumoniae* (7.4%) and one of them did not have any pathogen in sputum (3.7%). G2: 24 patients (75%) expectorated sputum, six of them (25%) had *Pseudomonas aeruginosa* in sputum culture, eight – *Haemophilus influenzae* (33.3%), one – *Streptococcus pneumoniae* (4.2%), one – *Escherichia coli* (4.2%) and eight of them did not have any pathogen in sputum (33.3%). There was detected a statistically significant difference between the number of patient with sputum colonized by pathogens ( $p=0.03$  by X<sup>2</sup> test), while there was not any statistical difference between the prevalence of species ( $p=0.19$  for *Pseudomonas aeruginosa*,  $p=0.79$  for *Haemophilus influenzae*).

**CONCLUSIONS:** 1. Almost half of the sample of Ukrainian patients with B had overweight or obesity, while only 7% of patients had underweight, which indicates geographical differences in body composition of patient with B. 2. Colonization of sputum by pathogens was found statistically significantly more often in patient with normal and underweight. 3. In both groups, the most frequent pathogens were *Pseudomonas aeruginosa* and *Haemophilus influenzae*, but in G1 prevailed *Pseudomonas aeruginosa*, while in G2 *Haemophilus influenzae*.

**CLINICAL IMPLICATIONS:** These data should draw the attention of doctors to the need to control the body composition of the patients and should be useful for deciding on the appointment of empirical antibiotic therapy.

**DISCLOSURES:** no disclosure on file for Valeriya Dmytrychenko;

No relevant relationships by Kateryna Gashynova, source=Web Response

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