incidence rate per year (p = 0.001). In females, there was a reduction of 0.802 in the rate per year in the age group of 20 to 29 years (p = 0.003). The macro-regions of the Midwest, Foz do Rio Itajaí and Plateau Norte presented a reduction in TB incidence rates. In the macro-regions of Greater Florianópolis and South, the trend was increasing (p < 0.05).

Conclusions

TB incidence rates in Santa Catarina are stationary. Growing trend in males. Growing trend in the male age groups up to 29 years and decreasing between 40 and 49 years. Decreasing trend in the female age group from 20 to 29 years. Macro-regions located in the coastal range have an increasing tendency and the macro-regions located in the Centre West of the State, a decreasing trend.

Keywords

Tuberculosis, Trend, Incidence.

O22

Trauma, impulsivity, suicidality and binge eating

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Background

Binge eating is a public health problem with physical and psychological effects, throughout life. Several studies explored the association between some variables (e.g. shame) and binge eating symptoms, but it is important to continue exploring the contribution of other correlates.

Objective

Explore the association and the predictive role of traumatic experiences, impulsivity and suicidality with/to binge eating symptoms.

Methods

421 subjects from the general population and college students (women, n = 300, 71.3%) completed the Traumatic Events Checklist, the Binge Eating Scale, the Barratt Impulsiveness Scale and the Suicidality Scale.

Results

The values of punctual prevalence of binge eating symptoms were similar to those from recent national studies, having found a severe severity of 2.6% in the total sample (3.3% in women). In both genders, suicidality total score and the body mass index (BMI) associated with binge eating total score. Only in women this score correlated with sexual and family trauma total scores and with the total score of traumatic events. If in men suicidality total score associated with family trauma total score and with the total score of traumatic events; in women that score also correlated with sexual trauma total score. In men, binge eating total score associated to attentional impulsivity (one of the first order impulsivity factors) and, in women, to all the first order impulsivity factors (attentional impulsivity, motor and non-planning), and with all the second order impulsivity factors (psychological attention, cognitive instability, motor, self-control and cognitive complexity), with the exception of perseverance. In women, attentional impulsivity particularly associated with sexual and family trauma total scores and with the total score of traumatic experiences. In women, the BMI, suicidality and attentional impulsivity total scores were the binge eating total score predictors.

Conclusions

In a sample from the general population and college students, we found that it is salient and of importance for future interventions, mainly in women, the predictive role of BMI, suicidality and attentional impulsivity scores to binge eating symptoms, with traumatic events (a more distal correlate) revealing significant associations, but not predicting these symptoms.

Keywords

Traumatic events, Impulsiveness, Suicidality, Binge eating.

O23

Computerised respiratory sounds during acute exacerbations of chronic obstructive pulmonary disease

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Background

Timely treatment and adequate monitoring of acute exacerbations of chronic obstructive pulmonary disease (AECOPD) have shown to reduce hospital admissions and recovery time, while improving patients' quality of life [1]. Nevertheless, this is challenging as AECOPD diagnosis/monitoring relies exclusively on patients' reports of symptoms worsening [2]. AECOPD are characterised by an increased airway inflammation and obstruction, abnormal bronchial mucus and air trapping, which results in changes in lung acoustics [2,3]. Thus, changes in respiratory mechanics related with AECOPD may be successfully monitored by respiratory sounds, namely adventitious respiratory sounds (ARS, crackles and wheezes) [3]. Nevertheless, little is known on ARS changes during the time course of AECOPD.

Objective

To evaluate ARS changes during the time course of AECOPD.

Methods

25 non-hospitalised patients with AECOPD (16 males, 70.0 ± 9.8yrs, FEV1 54.2 ± 20.6% predicted) were enrolled. Patients were treated with pharmacological therapy. ARS at anterior and posterior right/left chest were simultaneously recorded at hospital presentation (T1) and at weeks 3 (T3) and 8 (T8). ARS (no. of crackles and wheeze occupation rate–%Wh) were processed, per respiratory phase, using validated algorithms [4,5]. Differences were examined with Friedman and Cochran tests and both tests were corrected with Bonferroni corrections.

Results

Significant differences were found in no. of inspiratory crackles (0.6 [0.1-2.2] vs. 0.5 [0.1-2.5] vs. 0.3 [0.0-0.9]; p = 0.008) in T1, T3 and T8 at posterior chest, namely participants presented more inspiratory crackles (p = 0.013) at T1 than at T8. Similar results were found for inspiratory %Wh (0.0 [0.0-12.3] vs. 0.0 [0.0-0.0] vs. 0.0 [0.0-0.0]; p = 0.019), namely, participants presented significantly more inspiratory %Wh at T1 than at T3 (p = 0.006). A significant higher number of participants presenting inspiratory wheezes was found at T1 than at T3 at the anterior chest (%Wh: 10 vs. 2 vs. 5; p=0.017) and a trend to significance was found at posterior chest (%Wh: 10 vs. 3 vs. 4; p = 0.052). No differences were found for the remaining variables.

Conclusions

Crackles and wheezes seem to be sensitive to monitor the course of AECOPD. Inspiratory crackles seem to persist until 15 days after the exacerbations (*i.e.*, approximate time needed to resolve AECOPD [6]) whilst inspiratory %Wh significantly decreased after this period. This information may allow further advances in the monitoring of patients with COPD across all clinical and non-clinical settings, as respiratory sounds are simple, non-invasive population-specific and available by nearly universally means. Further studies with larger samples and including data collected before the AECOPD are needed to confirm these findings.

References

1. Wilkinson TM, Donaldson GC, Hurst JR, Seemungal TA, and Wedzicha JA. Early therapy improves outcomes of exacerbations of chronic obstructive pulmonary disease. Am J Respir Crit Care Med 169: 1298-1303, 2004.
2. The Global Initiative for Chronic Obstructive Lung Disease. Global Strategy for Diagnosis, Management, and Prevention of 543 Chronic

Obstructive Pulmonary Disease—2017 Report. The 544 Global Initiative for Chronic Obstructive Lung Disease, Inc.; 2017.
3. Gavriely N, Nissan M, Cugell DW, Rubin AH. Respiratory health screening using pulmonary function tests and lung sound analysis. Eur Respir Rev. 1994;7(1):35–42.
4. Pinho C, Oliveira A, Jácome C, Rodrigues JM, Marques A. Integrated approach for automatic crackle detection based on fractal dimension and box filtering. IJRQEH. 2016;5(4):34-50.
5. Taplidou SA, Hadjileontiadis LJ. Wheeze detection based on time-frequency analysis of breath sounds. Comput Bio Med. 2007;37(8):1073-83.
6. Seemungal TA, Donaldson GC, Bhowmik A, Jeffries DJ, Wedzicha, JA. Time course and recovery of exacerbations in patients with chronic obstructive pulmonary disease. Am J Respir Crit Care Med. 2000; 161(5): 1608-1613.

Keywords
Chronic Obstructive Pulmonary Disease, Acute exacerbations, Computerised respiratory sounds, Crackles, Wheezes.

O24

Trauma, self-disgust and binge eating

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Background
Binge eating disorder is finally recognized in the current Diagnostic and Statistical Manual of Mental Disorders-5. Additionally, international and national studies explored correlate binge eating symptoms, but it is important to evaluate the role of other variables for these symptoms, in the general population.
Objective
Explore the association and predictive role of traumatic experiences and of self-disgust with/in binge eating symptoms, exploring, also, the possible mediation role of self-disgust in the relation between traumatic experiences and those symptoms.
Methods
421 subjects from the general population and college students (women, n = 300, 71.3%) completed the Traumatic Events Checklist, the Binge Eating Scale and the Multidimensional Self-disgust scale.
Results
We found binge eating (BE) values similar to those from other national studies: mild to moderate BE (women: 6.3%; men: 5.0%) and severe BE (women: 3.3%; men: 0.8%). In men, BE total score positively correlated with defensive activation, cognitive-emotional and avoidance dimensions (self-disgust). Body mass index (BMI) positively correlated with BE total score and defensive activation (self-disgust) and negatively with family trauma. In women, BE total score positively associated with all self-disgust dimensions. Sexual trauma, family trauma, total of traumatic events and BMI positively associated with BE total score and all the self-disgust dimensions. In a hierarchical multiple regression analysis, BMI, total of traumatic events and the cognitive-emotional of self-disgust predicted BE total score. The cognitive-emotional (self-disgust) dimension mediated totally the relation between traumatic events and the BE total score.
Conclusions
In a sample from the general population and college students, BE values were similar to those from national studies. In women, sexual trauma, family trauma and total traumatic experiences (and all self-disgust dimensions) associated with BE. A higher BMI was associated with higher BE levels. In future interventions focusing on BE, in women, it seems important to consider the role of cognitive-emotional self-disgust in the relation between BE occurrence and distal traumatic events.

Keywords
Traumatic events, Self-disgust, Binge eating.

O25

New paediatric screening procedures: health promotion in primary care

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Background
Screening procedures do not identify the specific disorder but allow a quick identification of children who may need a detailed assessment in speech therapy. Screening instruments are usually performed by different health professionals (e.g. pediatricians, nurses). The Child Health Program for primary care in Portugal determined that all 5-year-old children should be screened by nurses and general practitioners to conclude if they present a typical development suitable to school requirements. This screening is usually implemented through the Mary Sheridan test and there is no speech-language screening test used in primary care. Recently a Speech and Language Screening was validated for Portuguese children in kindergartens with excellent levels of specificity, sensitivity and reliability. RALF aims to quickly identify (5 minutes) children who may be at risk of speech-language impairment and need to be referred to a in depth assessment by a Speech-Language Therapist.
Objectives
This study aims to implement a new screening procedure in primary health care contributing to best practices. Specifically, the study aims to identify children with speech-language disorder that are undiagnosed due to the absence of a known condition such as neurological, hearing or cognitive impairment.
Methods
Ethical approval was granted by the Ethics Committee (UICISA) (ref.14/2016). A sociocultural questionnaire characterizing child and family background was fulfilled by caregivers to collect information about the child's background (e.g., mother language; neurological, hearing, cognitive disorder) and child's family background. Subject selection criteria included: Portuguese as native language and absence of a language disorder secondary to a known condition. The sample comprised 37 children whose parents returned informed consents. The screening was applied by 10 nurses in the Global Health Examination of 5 years old children in 2 health care centres.
Results
Twenty-one percent of children failed the screening. This illustrates the high level of speech-language difficulties (without any other associated condition) and is consistent with previous research studies. The children that failed the screening were already been referred to speech-language services for a detailed assessment.
Conclusions
This study highlights the importance of the implementation of a screening procedure in primary health care contributing to best practices.