early adolescence and late adolescence), as well as their course with the cognitive functions in schizophrenia patients.
Methods PA, intellectual quotient (IQ), verbal learning, memory, processing speed, executive functions and verbal fluency were assessed using PAS, WAIS, RAVLT, TMT, WCST and COWAT measures respectively in a sample of 85 clinically stabilized male schizophrenia inpatients.
Results Negative correlations emerged between academic PA during adolescence and both verbal IQ and processing speed, while positive correlations were found with working memory. Negative correlations emerged between deterioration in academic PA during adolescence and both processing speed and immediate auditory verbal recall, while correlations with verbal learning were positive. There was no relationship between cognitive functions and either social PA or its deterioration.
Conclusion Our findings revealed significant associations between both academic PA and its course with cognitive functions in schizophrenia patients. In summary, deficits in several fields of cognitive functions seem to follow a different path long before and after the onset of the disease, but further investigation is necessary.
Disclosure of interest The authors have not supplied their declaration of competing interest.

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Comorbidity/dual pathologies

FC20

Role of metabolic, atherogenetic and psychological factors in patients with colorectal adenomas: Preliminary results of the psycho-Neuro-Endocrino-Immunology Modena (PNEI-MO) Research Group

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Introduction Pro-inflammatory states of the large bowel have a multifactorial aetiology, including metabolism, atherogenesis, and psychological determinants. Inflammation plays a role in depressive and anxiety disorders, is tightly associated with early pro-atherogenetic alterations and metabolic dysregulation, and is also a key factor for the development of colorectal cancer.
Aim To investigate the association between pro-atherogenetic factors, metabolic status, psychological assessment and presence of colorectal adenomas.
Methods Case-control study, approved by the local Ethic Committee. Patients aged 40 or more and undergoing colonoscopy for positive faecal blood test and/or abdominal symptoms, with a negative history for neoplasia or inflammatory bowel diseases, were enrolled. For each patient the following data were collected: waist and hip circumferences, BMI, arterial pressure, fasten serum glycemia, current medications. Beside colonoscopy, carotid intima-media thickness (IMT) was assessed by means of echographic evaluation. Psychometric assessment included HADS, TCI, IMSA, SF-36. Statistics performed with SigmaPlot v.12 Platform.
Results Preliminary results are available for 18 patients (male/female 8/10) Mean age 62.6 ± 8.4. Ten patients had at least one adenoma, 8 patients had no lesions. The following differences were noticeable: HADS-depression (mean ± SD) adenoma vs. no-adenoma: 4.9 ± 3.2 vs. 1.7 ± 1.8 ($P < .01$); IMT median value adenoma vs. no-adenoma: 793 vs. 638 micrometers ($P = .04$); Body weight (mean ± SD) adenoma vs. no-adenoma: 66.4 ± 8.7 kg vs. 80.9 ± 15.3 kg ($P = .03$); waist circumference (mean ± SD) adenoma vs. no-adenoma: 105.2 ± 13.4 cm vs. 89.5 ± 4.7 cm ($P < .01$).
Conclusions Preliminary data from PNEI-MO Research Group support the relation between systemic inflammation, psychological status and development of precancerous colorectal cancer lesions. Depression seems associated with the presence of colorectal adenomas.
Disclosure of interest The authors have not supplied their declaration of competing interest.

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Depression

FC21

Epigenetic signature of glucocorticoid receptor is associated with the familial component of depression: A twin-based study

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Introduction Despite the fact that depression has an estimated heritability around 40%, there is no definitive candidate gene contributing to its etiology. The lack of an identified genetic component for high-heritability disorders, like depression, gave rise to the concept of missing heritability. The epigenetics' field has pushed forward new hypotheses to fill this gap since transgenerational inheritance of epigenetic patterns has been described both in animal models and, more recently, in humans. Depression is usually associated with an abnormal stress response and an altered hypothalamic-pituitary-adrenal axis, regulated by the glucocorticoid receptor (coded by *NR3C1* gene). Therefore, NR3C1 has been widely investigated as a functional candidate gene involved in anxious-depressive spectrum disorders (ADSD) although a more comprehensive study of its methylation is further required (Palma-Gudiel et al., 2015).
Aims To analyze NR3C1 promoter's methylation and to study its association with anxious-depressive spectrum disorders.
Methods The sample consisted of 48 pairs of monozygotic twins, from the UB twin register, grouped as concordant, discordant and healthy pairs depending on whether both, one or none of the co-twins of each pair were affected by a lifetime ADSD, according to DSM-IV criteria (SCID). DNA methylation was assessed by bisulfite conversion and subsequent pyrosequencing.
Results Hypermethylation at specific CpG sites, not previously reported, was detected in concordant twin pairs as compared with discordant and healthy groups ($P = 0.03$).
Conclusions The epigenetic pattern newly described in *NR3C1* gene may be contributing to the familial component of depression and thus could be putatively explained by transgenerational inheritance of epigenetic phenomena.
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