Systemic lupus erythematosus: frequency of haematological abnormalities and screening for and causes of psychiatric manifestations

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Systemic lupus erythematosus (SLE) is a chronic autoimmune disease involving multiple organs and systems. It is characterized by a relapsing and remitting course with flares of variable severity. It frequently affects young woman of childbearing age. The last decades have seen large advances in the treatment of SLE but it remains a disease associated with considerable morbidity and important mortality. In this issue of the Acta Reumatologica Portuguesa three different articles on SLE are published. The article by Aleem *et al.* is a report on a retrospective cohort study looking at the frequency of haematological abnormalities and clinical haematological manifestations in patients with SLE both at diagnosis and after a mean follow up of 10 years and their association with other disease manifestations and organ involvement[1]. The two other articles are reviews of the literature focusing on psychiatric manifestations in patients with SLE. Vargas and Vaz present a systematic literature review spanning 10 years of articles investigating methods of screening for probable psychiatric manifestations of SLE: cognitive dysfunction and mood and anxiety disorders[2]. Braga and Campar review the published evidence for biological causes of depression in patients with SLE[3].

Haematological abnormalities are among the most common abnormalities detected in the assessment of patients with SLE and are associated with significant clinical manifestations. Previous studies have suggested that the frequency of different disease manifestations in SLE can vary in different populations. The article of Aleem et al is a retrospective study of a cohort of more than 600 patients followed up in a University Centre in Riyadh, Saudi Arabia. The same cohort had already been described in previous publications[4]. At diagnosis anaemia, lymphopaenia and leukopaenia, low complement, positive Coomb's test, prolonged coagulation time and positive antiphospholipid antibodies were frequently seen. At the last follow up anaemia, lymphopaenia and low complement were frequently present. Anaemia was the most common manifestation both at diagnosis and at last follow up. Differences with frequencies reported for other cohorts from other countries are at least partially due to what types of anaemia were included[5,6]. The authors found different associations between the haematological abnormalities and other disease manifestations but it is unclear to what extent this is useful in guiding monitoring and treatment of SLE patients.

Mild to moderate anaemia is very frequently present in patients with SLE and can contribute to other symptoms such as fatigue. In clinical practice, the anaemia is often multifactorial with causes including the active disease itself, direct and indirect effects of drugs and associated conditions. It is not always easy to diagnose the exact contribution of each of these factors and treat appropriately. In patients with chronic anaemia it can also be difficult to decide when to reinvestigate for contributing factors that can be treated.

Psychiatric manifestations in patients with SLE are common including early in the course of the disease. They are associated with lower quality of life, increased functional disability, sleep disorders, increased unemployment rate and health service utilization[2]. They also contribute to non-adherence to treatment[11]. These manifestations are frequently undiagnosed and undertreated. This is partially due to uncertainty about its exact cause, i.e., whether they reflect active immune mechanisms and central nervous system pathology or the psychosocial impact of a chronic disease, and to

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difficulty in diagnosis. Difficulty in diagnosis is related to the nature of the complaints and lack of easy to use, validated tools for screening or diagnosis particularly by physicians who are not mental health specialists. There is a wide variation in the prevalence of psychiatric manifestations reported in different cohort studies and this is at least partially due to variability in the tools used for diagnosis and different criteria. Recently published reviews provide an overview of neuropsychiatric manifestations in patients with SLE and its pathogenesis, its treatment and of the role of modern neuroimaging in its diagnosis[7,9,10].

Vargas and Vaz present a systematic review of articles published between 2002 and 2012 that reported on the use of a screening tool or method to diagnose cognitive dysfunction, mood or anxiety disorders in patients with SLE. Once their inclusion and exclusion criteria were applied only 12 articles were selected for detailed analysis. In the studies reviewed, different tools and methods were used for screening SLE patients (both adults and paediatric populations) for these psychiatric manifestations, the majority of them not specifically developed for SLE. The tools included physician-administered and self-administered tools with variable sensitivities, specificities, positive and negative predictive values. The review emphasizes the need for further research into this area, including the need for validated translations of tools based on the English language so that they can be used in other populations.

Depressive symptoms in patients with SLE are very commonly observed[8]. It is always difficult to assess whether they are a consequence of the psychosocial impact of the disease or related to dysfunction of the central nervous system directly related to the disease process. In the absence of evidence of active disease in other organs or systems it is generally treated symptomatically and not with immunosuppressive drugs.

Braga and Campar reviewed published studies that explore possible biologic causes for depression in SLE including human and animal studies. The roles of chronic inflammation and persistently raised cytokine levels, dysfunction of the hypothalamic-pituitary--adrenal axis associated with immune dysfunction and possible direct and indirect effects of neuro-reactive antibodies as well as corticoterapy and cerebro-vascular disease are reviewed.

The two review articles focusing on psychiatric manifestations in SLE emphasise its high frequency and underdiagnosis and undertreatment. Data reviewed shows the uncertainty regarding the etiology of these manifestations in patients with SLE and the difficulty in its diagnosis and treatment. It is also often difficult to distinguish neuropsychiatric manifestations of SLE from other neuropsychiatric conditions with different etiologies. There is a clear need for further research in these areas to expand our knowledge of specific pathogenic mechanisms involved, development of reliable diagnostic tools and possible specific therapeutic agents. Routine clinical practice when looking after patients with SLE should include easy access to a multidisciplinary team that includes a neurologists, a psychiatrist and other specialists in mental health.

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