

Depression, anxiety, PTSD, and cognitive impairment in Lebanese patients on hemodialysis: a call for action

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Highlights

Patients on hemodialysis are at increased risk for depression, anxiety and post-traumatic stress disorder (PTSD).

Patients on hemodialysis, particularly older adults, are at increased risk of developing cognitive impairment, due to cardiovascular risk factors and psychiatric comorbidity.

Physicians should perform a brief psychiatric and cognitive screening prior to starting hemodialysis and during dialysis, especially in the context of recent trauma.

In a cross-sectional study involving 42 Lebanese participants on hemodialysis who were subject to a major trauma (Beirut explosion), prevalence rates of depression, anxiety, PTSD, and cognitive impairment were alarming at 57.1%, 54.8%, 33.3% and 23.8% respectively, necessitating urgent interventions in this population.

Text:

Cognitive impairment is common and often undiagnosed in patients on hemodialysis, due to older age and increased cardiovascular comorbidities, notably the presence of strokes (1). It can also be exacerbated by the increased risk of having comorbid psychiatric illness, including depression, anxiety, suicidal ideations and post-traumatic stress disorder (PTSD) (2). The prevalence of cognitive impairment among patients on hemodialysis, assessed using neuropsychological tests, varies from 16 to 38%, whereas this prevalence ranges from 6.6 to 51%, using screening tests. The most commonly used screening tests were the Mini-Mental State Examination (MMSE), the Montreal Cognitive Assessment (MoCA) and the Modified Mini-Mental State (3MS) (3).

On August 4, 2020, Beirut, the capital city of Lebanon which is a small Mediterranean, low-income country, witnessed a major explosion resulting in more than 200 deaths and 7000 injured (4). Several hospitals were either partially or completely destroyed, and many hospital staff and patients were injured or killed by the blast, including patients undergoing hemodialysis.

In this context, we conducted a cross-sectional study between March and April of 2021 (6 months following the disaster) to explore prevalence rates of depression, anxiety, suicidal ideations, PTSD, and cognitive impairment among adults receiving hemodialysis at Saint Georges Hospital University Medical Center, which is a major hospital that was destroyed by the blast. The Hospital Anxiety and Depression Scale (HADS) was used to assess for anxiety and depression using cut-offs of ≥ 6 and 7 for anxiety and depression, respectively (these cut-offs have been commonly used in the population of hemodialysis subjects) (5). Suicidality was assessed using direct questioning about passive death wishes, ideations, plans or attempts. PTSD was assessed using the PTSD checklist for DSM-5 (PCL-5), which is a 20-item screener based on the Diagnostic and Statistical Manual (DMS)-5 criteria for PTSD. A cut-off of 23 was used, which is based on a previous study in Arab refugees (6). Cognitive impairment was assessed using the Mini-cog which is comprised of word-recall and clock drawing components and has a sensitivity of 80 to 99%, and a specificity of 90 to 93% (7, 8); this tool has not been used in the literature before in patients undergoing hemodialysis.

A total of 42 patients were included in the assessment. Mean age of participants was 66.1 years with a standard deviation (SD) of 11.3. 92.9% of the participants were age 50 years or older. 45.2% were females. 31% had a high-school-level education or above. 66.7% belonged to a middle socioeconomic status (SES) and 9.5% to a high SES.

Anxiety and depression rates were found to be high, reaching 54.8% and 57.1%, respectively. 26.2% had passive death wishes and 7.1% had suicide plans; however no one had attempted suicide. 33.3% screened positively for PTSD using the PCL-5. Around a quarter of the sample (23.8%) were found cognitively impaired as shown by the Mini-Cog (< 3), despite no previous dementia diagnosis. The data is presented in the figure below.

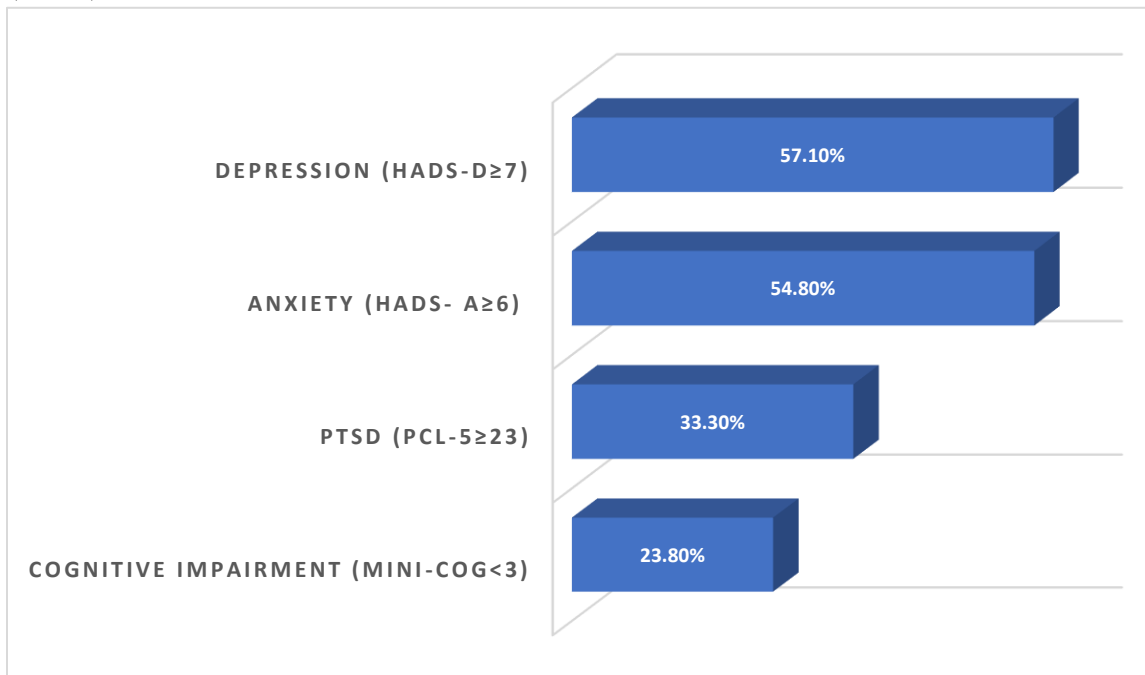
Our study showed significantly higher rates of anxiety and depression (55 and 57%, respectively), compared to patients undergoing hemodialysis in other Lebanese hospitals prior to the blast using the same screening instrument, the HADS (9, 10); these rates are also among the highest in the Arab world, notably in comparison to Saudi Arabia, Morocco, and Kuwait (11-14).

Our study is the first to explore PTSD and cognitive impairment prevalence rates in patients on hemodialysis in Lebanon and the Arab countries. The respective rates of 33.3 and 23.8% were found to be alarming, and higher than international figures, even after major traumatic events. For instance, in the year following hurricane Katrina in New Orleans, United States, 23.8% of hemodialysis patients reported symptoms consistent with PTSD using the PCL-17/DSM-IV (15).

It is noteworthy that the population has been going through several cumulating stressful factors in addition to the Beirut blast. In October of 2019, there was an enormous devaluation of Lebanese currency, and this was followed by the COVID-19 pandemic, which has been perceived as a traumatic event by itself, especially in a vulnerable population like older adults on hemodialysis.

This population needs particular attention with respect to their mental health, as it is directly correlated with quality of life and mortality risk. Regular screenings prior to initiation and during hemodialysis are needed to improve early detection and management of these disorders.

Figure 1. Screening for Psychiatric Disorders in Lebanese Hemodialysis Patients (N=42)



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