THE CHALLENGES OF MANAGING PSYCHIATRIC DISORDERS IN CHILDREN WITH KIDNEY TRANSPLANT AND END-STAGE RENAL DISEASE: A CASE REPORT

ANA MARIA CIUBOTARIU*, OANA FODOR, ILINCA MIHAILESCU
Child and Adolescent Psychiatry Department, "Prof. Dr. Alex. Obregia" Psychiatry Hospital, Bucharest

*Corresponding author email: anamaria.ciubo@gmail.com

ABSTRACT
Chronic disease impacts the individual, especially when talking about children and adolescents growing up with it. It represents a disabling condition, which holds the risk of delays in the psychosocial development and affects different areas in a person's life. One of the most notable impacts chronic disease has is the one on the mental health of the patient. Congenital kidney disease makes no exception and depression is the most common psychological comorbidity associated with renal failure and hemodialysis, with serious impact on the individual's quality of life and adherence to treatment. By being a disabling medical condition, end-stage renal disease also impacts the individual's social life, that can lead to other psychiatric symptoms such as self-loathe, self-deprecating attitude, suicide intentions and self-harm behaviours, hostility and aggression towards the others and himself, due to the feeling of frustration and inadequacy, lack of friends and social life.

Keywords: chronic disease, depression, renal disease, mental health.

INTRODUCTION:

Chronic kidney disease is considered to be a problem with multiple layers and various connotations for the patient, not only physically speaking, but also by taking its toll on the mental health of the individual. Moreover, patients suffering from renal failure that find themselves in need of hemodialysis are in a dependent relationship with a machine, a procedure and a team of medical professionals for the rest of their lives, which often leads to depression in the patients and anxiety in the caregivers [1].

End-stage renal disease has significant implications not only for the individual, but also for his family and the community, as it remains a life-threatening condition with a high mortality rate and associated low quality of life, despite the ongoing advances in health care and technology [4].

Depression negatively affects not only the social and economic well-being of the chronic renal failure patients, but also the psychological well-being, thus contributing to a lower quality of life [2]. Also, suicide rates are higher in dialysis patients than the healthy, with no underlying medical conditions population [1]. The chronic renal disease patient's difficulty or even inability to participate in sports and other social activities has a negative effect on the individual's feelings of autonomy and self-esteem [2].

Though depression is considered to be a common mental health problem in patients with renal disease, it is highly underdiagnosed and understudied. As far as children and adolescents with kidney failure are concerned, there is almost no data available regarding the importance and severity of depressive symptomatology associated with this disease [3]. However, it is known that children with an underlying chronic disease are considered to be at an elevated risk for depressive symptoms [5].

Some conditions, such as renal failure with the need of hemodialysis, are life limiting and research has shown a strong link between this type of illnesses and mental health problems in children and adolescents, as they encounter not only disease-associated challenges, but also stress factors related to puberty and adolescence [6].

Growing up with a chronic disease also has a significant impact on reaching certain psychosocial developmental milestones even as a young adult, as shown in the study assessing the social, psychosexual and autonomy domains – the findings show less participation in sports, later sexual intimacy and lower likeliness to have paid jobs, with end-stage renal disease being one of the most affected disease groups [7].

CASE PRESENTATION

We report the case of a 16-year-old male patient, with multiple admissions in the Pediatric Psychiatry Ward – between the ages of 12 and 16, for hostile behaviours towards family members and colleagues, lack of remorse following the aggressive behaviours, recurrent feelings of worthlessness and inadequacy due to his medical condition and his physical appearance, suicide ideation and explicit intention to harm himself, impaired social interaction with peers.

Case history:

Family history: No family history of psychiatric disorders – mother with autoimmune thyroiditis, father with cardiac disease, two healthy siblings.

Developmental milestones: Motor delay without cognitive or language delay – he sat without support at 8 months old, he started walking independently at 1 year and a half of age.

Medical history:

1. Congenital Renal Disease – kidney transplant at 2 years old.
2. Renal Osteodystrophy – multiple skeletal deformities, especially affecting the hips and legs.
3. Osteoporosis.
4. Congenital ano-rectal fistula – which led to recurrent infections; he underwent surgical treatment in December 2019; after surgery complications included the onset of a severe generalized tremor.
5. Transplant rejection since 2019 – currently the patient is under hemodialysis 2 times a week.

Examination and investigations – diagnostic assessment:

- ***Abnormal clinical findings:*** Short stature – H 140 cm, short trunk, scoliosis, extreme genu varum, self-inflicted linear lesions on both forearms, post-surgical scars on the abdomen and lumbar region, gait problems.
- ***Paraclinical investigations:***
  - Cerebral MRI, EMG, EEG – normal;
  - High levels of creatinine, potassium, chloride, magnesium;
- ***Abnormal psychiatric findings:***
  - Lack of interest for maintaining basic hygiene.
  - Flattened facial expressions and limited use of gestures.
  - Depressed mood, recurrent feelings of worthlessness and inadequacy, self-deprecating attitude – he uses strong language to describe himself; active suicide ideation – he expresses his explicit wish to die, giving a variety of irrational reasons to support his wish.
  - Aggressive behaviours towards family members and colleagues – there is a track record of violent actions like stabbing a colleague's hand with a pen, attacking his mother with a knife, multiple physical attacks on his toddler brother.
  - Reiterative speech about his desire to perform various torture acts, most of which are extremely violent or sexually deviant in nature, lack of remorse.

- Poor social skills, lack of friends, bullying victim in the middle school – according to him. He uses bullying as an excuse for his urge to perform torture acts.
- Restrictive interests.
- Cognitive abilities below the expected level.

▪ ***Psychological evaluation:***
- IQ (RAVEN) = 92;
- BDI = 35p;
- CAST = 22p.

Diagnostic assessment – The psychiatric diagnosis was set to Severe Depressive Disorder, Asperger's Syndrome and Disharmonic Personality Traits – with antisocial psychopathic tendencies.

Therapeutic intervention

The patient is currently under treatment with multiple drugs for his severe medical condition – Tacrolimus, Mycophenolate mofetil, Candesartan, Metoprolol, Methylprednisolone, somatropin, Furosemide, vitamins and minerals.

At the moment, the patient is not under any psychotropic treatment since December 2019. However, he received treatment with an atypical antipsychotic – risperidone, increasing dosage to a maximum of 1,5 mg per day, between 2017 and 2019, in order to ameliorate the aggressive behaviour. Initially, there was a reported improvement of the aggression, but furtherly worsening. He also received treatment with an antidepressant of the selective serotonin reuptake inhibitor class – fluvoxamine, 50 mg per day, for approximately four months, between September and December 2019, with almost no improvement of the depressive symptoms.

In December 2019, immediately after the surgical intervention for anal fistula, the onset of a severe generalized tremor led to the cessation of the risperidone and fluvoxamine treatment, but with no improvement of the tremor whatsoever. Moreover, due to the high blood levels of tacrolimus and the worsening of the renal function, the patient started hemodialysis and was furtherly added to the national transplant waiting list.

Since his first admission to the Pediatric Psychiatry Department, the patient was included in various psychotherapy programs, such as cognitive behavioural therapy, family therapy and socializing groups, all led by various therapists, but with no significant improvement – reported neither by the patient and his family, nor by the psychotherapists.

OUTCOMES AND DISCUSSIONS

Not only did the symptomatology persist up until January 2020, with no significant improvement neither under psychotropic medication, nor by attending various psychotherapy sessions, but also, approximately after his anorectal procedure, his psychiatric symptoms exacerbated, especially the self-loathing and suicidal thoughts, leading to the recurrent admissions to the Pediatric Psychiatry Ward from the last months.

Since starting high-school, there has been a slight improvement regarding his hostile behaviour towards society as a result of no more alleged bullying, compared to the middle school. However, an increase in self-hostility was reported by the patient himself. Also, while his colleagues did not bully him anymore, he still was not able to build a relationship with them.

The prognosis for this patient is a poor one, due to the severe underlying medical conditions and also due to the lack of significant improvement of the psychiatric symptomatology as a response to the psychopharmacological and psychotherapeutic interventions.

The particularities of the case raise some questions up for discussion:

▪ Are the psychiatric symptoms of the patient correlated with the severe medical

condition as a direct result or are they more likely triggered by the suffering caused by his illness?

- Are the psychiatric symptoms of the patient comorbid but not directly in relation to the chronic disease?
- Considering the lack of response to the aforementioned therapeutic plan and also the potential interactions between the drugs for his underlying medical conditions and the psychotropic drugs that might be a treatment option, what is the best course of action regarding the patient's psychiatric symptomatology?

CONCLUSIONS

The comorbid depression and other psychiatric disorders that are frequently associated with chronic diseases are insufficiently studied when dealing with children and adolescents.

In presenting this case, we intended to highlight the challenges that may occur when managing the psychiatric symptomatology of a young patient with a disabling medical condition such as chronic kidney disease and the factors that must be taken into consideration when conceiving a therapeutic plan.

REFERENCES:

1. De Sousa A. Psychiatric issues in renal failure and dialysis. Indian journal of nephrology, 2008, 18(2), 47–50.
2. Gerogianni S.K., Babatsikou F. Psychological aspects in chronic renal failure. Health Science Journal 2014, 8. 205-214.
3. Kimmel P.L. Depression in patients with chronic renal disease: What we know and what we need to know. Journal of Psychosomatic Research, 2002, 53(4), 951-956.
4. Gebrie M.H., Ford J. Depressive symptoms and dietary non-adherence among end stage renal disease patients undergoing hemodialysis therapy: systematic review. BMC Nephrol 2019, 20, 429.
5. Bennett D.S. Depression Among Children with Chronic Medical Problems: A Meta-Analysis, Journal of Pediatric Psychology, 1994, 19(2), 1994, 149–169.
6. Barker M.M., Beresford B., Bland M., Fraser L.K. Prevalence and Incidence of Anxiety and Depression Among Children, Adolescents, and Young Adults With Life-Limiting Conditions: A Systematic Review and Meta-analysis. JAMA Pediatr.2019,173(9):835–844.
7. Maurice-Stam H., Nijhof S.L., Monninkhof A.S., Heymans H.S.A., Grootenhuis M.A. Review about the impact of growing up with a chronic disease showed delays achieving psychosocial milestones. Acta Paediatr. 2019; 108: 2157– 2169.