Anxiety, depression, and quality of life in patients with familial glomerulonephritis or autosomal dominant polycystic kidney disease

Ansiedade, depressão e qualidade de vida em pacientes com glomerulonefrite familiar ou doença renal policística autossômica dominante

Authors

Bruna Paes de Barros[1]
José Luiz Nishiura[1]
Ita Pfeferman Heilberg[1]
Gianna Mastroianni Kirsztajn[1]

[1]Discipline of Nephrology, Department of Medicine, Universidade Federal de São Paulo (UNIFESP).

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Correspondence to:
Gianna Mastroianni Kirsztajn
Disciplina de Nefrologia da UNIFESP
Rua Botucatu, 740,
Vila Clementino
São Paulo – SP – Brazil
Zip code: 04023-900
E-mail: gianna@nefro.epm.br

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ABSTRACT

Introduction: Psychological aspects and quality of life are often evaluated in patients under renal replacement therapy, but studies about anxiety, depression, and quality of life in familial renal diseases are lacking. **Objectives:** To evaluate the frequency of anxiety, depression, and quality of life (QOL) and their eventual associations with the main laboratory, clinical, socioeconomic, and cultural parameters in familial glomerulonephritis (GN) or autosomal dominant polycystic kidney disease (ADPKD). **Methods:** Ninety adult patients (52 familial GN and 38 ADPKD) completed the questionaires of State Trait Anxiety Inventory (STAI), Beck Depression Inventory (BDI), and QOL-Short-Form SF-36, and were also submitted to a short interview. **Results:** Moderate anxiety was detected in both groups. Depression was found in 34.6% of familial GN and 60.5% of ADPKD patients. Anxiety and depression were more associated with female gender in familial GN, and with poorer schooling in ADPKD. Patients of both groups presented two quality of life unfavorable dimensions: emotional role function and general health perception. In addition, quality of life was worse among females, unmarried, and Caucasian subjects, and those individuals with a poorer educational level. **Conclusion:** The use of these instruments allows one to appreciate the frequency and levels of anxiety, depression, and quality of life in patients with familial renal diseases that could affect their compliance to treatment. These findings can contribute to planning a better multidisciplinary assistance to such groups of patients.

RESUMO

Introdução: Aspectos psicológicos, transtornos psiquiátricos e qualidade de vida são frequentemente avaliados em pacientes em terapia renal substitutiva. Entretanto, não existem estudos que analisem ansiedade, depressão e qualidade de vida especificamente em pacientes portadores de doenças renais familiares. **Objetivo:** Avaliar a frequência de traços e estados ansiosos e depressivos e qualidade de vida, verificando as possíveis relações com os principais achados laboratoriais, clínicos, socioeconômicos e culturais de pacientes portadores de glomerulonefrites (GN) familiares ou de doença renal policística autossômica dominante (DRPAD). **Métodos:** Noventa pacientes adultos (52 GN familiares e 38 DRPAD) foram avaliados utilizando Inventário de Ansiedade Traço-Estado (IDATE), Inventário de Depressão Beck (Beck) e Questionário de Qualidade de Vida *Short Form*-36 (SF-36), além de uma breve entrevista. **Resultados:** Observou-se ansiedade moderada em ambos os grupos, depressão em 34,6% das GN e em 60,5% das DRPAD. De um modo geral, ansiedade e depressão associaram-se mais ao gênero feminino na GN familiar e ao pior nível educacional na DRPAD. Pacientes de ambos os grupos apresentaram duas dimensões mais afetadas no que se refere à qualidade de vida, o aspecto emocional e a percepção geral do estado de saúde. Além disso, o SF-36 revelou que na presente amostra, a qualidade de vida foi pior para o sexo feminino, e para pacientes de cor branca, com baixa escolaridade e sem parceiros estáveis. **Conclusão:** Os questionários aplicados permitiram identificar frequência e graus de ansiedade, depressão e comprometimento da qualidade de vida nos pacientes com doença renal familiar, que poderiam afetar a

Keywords: anxiety, depression, quality of life, glomerulonephritis, chronic kidney failure.

aderência desses pacientes ao tratamento. Esses achados podem contribuir para o planejamento de um melhor atendimento multidisciplinar para ambas as doenças.

Palavras-chave: ansiedade, depressão, qualidade de vida, glomerulonefrite, falência renal crônica.

Introduction

Information regarding the presence of genetic disease causes individuals, who once believed to be healthy, to become aware of their genetic potential to develop some type of disease in the future or to transmit it to their descendants. Examples of such diseases include: familial glomerulonephritis (GN) and autosomal dominant polycystic kidney disease (ADPKD), besides other familial chronic renal diseases.

It is important to point out that *Online Mendelian Inheritance in Man* (OMIM) has already registered more than 50 renal diseases with genetic origins and that the presence of family history of end-stage chronic kidney disease (CKD) is a significant risk factor for the subsequent development of nephropathy.[1,2]

ADPKD is one of the most common genetic diseases in the USA, with the prevalence of 1/800 individuals.[3] Also, it is the underlying cause of end-stage renal disease in up to 10% of the cases. It has already been proved that ADPKD and depression are positively associated, in a statistically significant manner, in patients who initiated home hemodialysis.[4] The concomitant depressive symptoms, or even depression, in patients undergoing dialysis are also frequently reported, and such conditions may represent another risk factor for mortality, apart from predicting morbidity.[5-9] Indeed, most studies have evaluated depression and quality of life in patients with kidney disease, who were submitted to dialysis or kidney transplant. Few studies have evaluated these aspects during the early stages of CKD, when renal function begins to decline.

Nowadays, it is worth to mention that depression is a significant disease, and the World Health Organization (WHO) estimates that in the beginning of the 21st century, it will be the second most common debilitating disease in the world.[10] Projections for 2020 place it as a relevant cause for the decrease in life expectancy in developing countries, being responsible for 5.6% of the cases. In fact, some depressive symptoms may be in the lack of compliance: discouragement, loss of motivation and energy, difficulty in concentrating and memorizing, and social isolation, compromising the adherence to therapeutics and modulating nutritional and immunological situations.[12,13]

The first studies on the psychological aspects in familial renal diseases were performed by Manjoney and Mckegney, in 1978. They studied families with ADPKD, and the most important finding corresponded to "feeling guilty" for the transmission of a genetic disease to the family members.[14] Torra and Ballarin added that having a guilty conscience and not speaking about the disease were the aspects observed in members of families with hereditary renal diseases.

On the other hand, "denial" is a universal initial answer to a traumatic experience, and, without any doubt, it was the most common psychological defense observed in patients with Alport syndrome. One of the patterns that repeated itself was the combination of mother's depression and an overprotective attitude towards a son who is affected by the Alport syndrome. From that, it became clear that families with any kind of manifestation of Alport syndrome should be encouraged to openly discuss previous history of family members, their fears, feelings or guilt, their expectations and hopes. The role of the doctor and an empathetic attitude are essential for this process. Mothers with little or no manifestation of the disease, whose children have Alport syndrome, seem to have a special need for psychological support.[15]

As to the quality of life, some studies have shown that anemia, age, ethnicity, general clinical condition, type of dialysis, sedentarism, sleep disturbance, pain, erectile dysfunction, affective depression, and dissatisfaction with medical assistance may be associated with a different perception of quality of life in patients with end-stage renal disease.[16]

The aim of the present study was to describe anxiety, depression, and quality of life in patients with familial renal diseases, as well as to evaluate the clinical, laboratory, social, cultural, and economic markers that are eventually associated with such conditions in patients with familial GN and ADPKD.

Materials and Methods

The present study was performed in 52 outpatients with familial GN, - and 38 outpatients with ADPKD, that were assisted respectively at the Glomerulonephritis Ambulatory Care Unit at the Polycystic Kidney Disease Unit of the Nephrology Division from Universidade Federal de São Paulo (São Paulo, Brazil).

The criteria for selection were: patients who had familial GN (the focus was family involvement) or ADPKD; patients aged at least 18 years, and assisted in the aforementioned clinics. ADPKD diagnosis was based on family history of the illness, that is, an ancestor (father or mother) affected, and renal ultrasonography showing cysts, fulfilling the criteria proposed by Pei *et al*.[17] for each age group. The criteria for exclusion were: patients presenting oligophrenia or those who were illiterate. The study was approved by the Local Ethics Committee from the University. After signing the consent form and agreeing to participate in the study, the patients filled out the State Trait Anxiety Inventory (STAI), Beck Depression Inventory (Beck), and SF-36 (Medical Outcomes Study 36-Item Short-Form Healthy Survey). The instruments were used according to their standardization, that is, respecting time limits, verbal instructions, preliminary demonstrations, and the ways to answer the questions, in the following sequence: STAI, Beck, and SF-36.

As to the instruments used in the study, the STAI self evaluation survey comprises two scales to analyze the anxiety state (STAI – state) and the anxiety trait (STAI – trait). Each involves 20 statements (with a scale of 1 to 4). Therefore, the total score of each scale may vary from 20 to 80, and the highest values indicate high levels of anxiety. These scores represent low (20-30), average (31-49), and high (≥50) levels of anxiety. Regarding the anxiety scales, STAI is one of the scales most commonly used around the world. STAI was validated in Brazil[18-21] and was approved for scientific research, according to resolution nº 002/2003 of *Federal Council of Psychology* - although it also recommends reviewing and updating normative data. The fact that it has been used in several theses in Brazil,[22-24] as well as in scientific articles,[20,21,25] also reinforces its applicability.[20-22,24,25] Authors consider that, in order to standardize the language between studies of different origins, the use of such instrument aggregates information and, therefore, it was adopted in the present study.

Beck Depression Inventory is a self-applicable evaluation compounded of 21 items, each with four options, with scores varying from 0 to 3, in which 3 is the worst condition. The items refer to sadness, pessimistic thinking, feeling of failure, self dissatisfaction, guilt, punishment, self-loathing, self-accusations, suicidal thoughts, crying, irritability, social withdrawal, indecision, change in self-image, difficulty to work, insomnia, fatigability, loss of appetite, weight loss, somatic concerns, and loss of libido. The total score is the sum of each item's score (maximum of 63 points) and allows the classification of depression intensity levels (10-18 points: mild; 19-29: moderate; ≥30: severe).

SF-36 is comprised of 36 questions that evaluate the following eight dimensions: physical functioning, physical role function, body pain, general health perception, vitality, social function, emotional role function and mental health. The values of each item vary from 0 to 100, in which 0 is the worst health situation and 100 is the best. SF-36 is one of the most common ways to evaluate the quality of life around the world, including of populations with CKD. It is classified as a generic instrument; one of its advantages is the possibility to evaluate several domains simultaneously, and the fact that it can be used in any population, besides allowing comparisons between patients with different diseases. Its only disadvantage is the impossibility to demonstrate alterations as to physical aspects.

A short interview with the patients was performed in order to document the knowledge in relation to the disease. Medical records of these patients were also used for data collection, aiming at presenting an overview of the clinical history.

The groups of patients were compared, taking into account clinical, laboratory, and demographic aspects, quality of life, anxiety, and depression scores, with ANOVA or Student's t test. For the intragroup correlation, Spearman coefficient was used. A linear regression model was also built. P-values <0.05 were considered significant. The data were analyzed with SPSS for Windows, version 9.0.

Results

Fifty-two patients with familial GN and 38 with ADPKD participated in this study. They all had at least one first-degree relative with CKD.

Among the patients with familial GN, 27 had a previous renal biopsy, which determined the following diagnoses: 25.9%, focal segmental glomerulosclerosis; 14.8%, minimal change disease; 11.1%, membranous nephropathy; 11.1%, membranoproliferative glomerulonephritis; 7.4%, proliferative GN; 7.4%, IgA nephropathy; 3.7%, Alport syndrome; 3.7%,

C1q nephropathy; 3.7%, lupus nephritis; and 11.1%, chronic GN with no conclusive histological diagnosis. The others had glomerular hematuria and/or proteinuria without biopsy.

Patients or relatives with CKD secondary to diabetes and/or hypertension, nephrolithiasis and urinary infection were not included in the present study.

When demographic data, clinical and laboratory evaluations, and comorbidities of patients with familial GN were compared to those of individuals with ADPKD, there were no statistically significant differences, except as to the parameter "time of diagnosis", which was longer in the group with ADPKD (p = 0.012) (Table 1). Hypertension and dyslipidemia were the most significant comorbidities found in both groups. Patients with familial GN presented diabetes mellitus secondary to the treatment with corticosteroids in 7.7% of the cases. As expected, end-stage renal disease was more frequently diagnosed in the ADPKD group than in the familial GN group (13.2% and 5.8%, respectively).

Mild level of state anxiety and moderate level of trait anxiety were observed in both groups. Anxiety was higher in women in the familial GN group. Besides, low schooling was associated with higher scores of trait anxiety in the ADPKD group (Table 2).

Table 1 Demographic, clinical, and laboratory data of familial GN and ADPKD groups. Data are presented as percentage, except when being expressed otherwise

Demographic, clinical, and laboratory data	Groups		p-value
	Familial GN (n = 52)	ADPKD (n = 38)	
Gender			0,097##
Female	31 (59.6%)	29 (76.3%)	
Male	21 (40.4%)	9 (23.7%)	
Age – years (average ± SD)	40.2 ± 12.6	38.5 ± 12.1	0.518#
Race/ skin color			0,054##
White (Caucasian)	40 (76.9%)	22 (57.9%)	
Non-Caucasian	12 (23.1%)	16 (42.1%)	
Time devoted to education			0.333**
(a) ≤ 8 years	30 (57.7%)	17 (44.7%)	
(b) ≥ 8 and ≤ 11 years	17 (32.7%)	14 (36.8%)	
(c) ≥ 11 years	5 (9.6%)	7 (18.4%)	
Marital status			0.143##
Not married (single, separated, or divorced)	18 (34.6%)	19 (50.0%)	
Married (or living together)	34 (65.4%)	19 (50.0%)	
Religion			0.389**
Catholic	31 (62.0%)	16 (44.4%)	
Protestant	10 (20.0%)	11 (30.6%)	
"Those who believe in God, but don't follow a religion"	7 (14.0%)	6 (16.7%)	
Others†	2 (4.0%)	3 (8.4%)	
Time of diagnosis mean (min.-max.)	4.5 (1 – 21)	6.0 (1 – 37)	0.012*
Serum creatinine at interview (mg/dl) mean (min- max.)	1.0 (0.6 – 2.0)	1.1 (0.7 – 1.9)	0.174*
Comorbidities			
Hypertension	38 (73.1%)	24 (63.2%)	0.315##
Diabetes mellitus	4 (7.7%)	-	0.135**
Hyperlipidemias	24 (46.2%)	11 (29.0%)	0.098##
End-stage renal disease∞	3 (5.8%)	5 (13.2%)	0.275**

 # Student's *t* Test; ## χ^2; * Mann-Whitney Test; ** Fisher Test; † Atheism, Kardecism and Buddhism; ∞ End-stage renal disease: chronic kidney disease in need of renal replacement therapy.

When the state anxiety inventory was given to both groups, the most frequently observed answers were feelings of anxiety, "not feeling at home", concerns about adversities and lack of happiness.

In the trait anxiety inventory, tension, concerns related to constantly thinking about problems, tiredness, and persistent ideas without a real importance, which keep the person busy, were the most frequent answers for both groups.

Depression was detected in 34.6% of the patients with familial GN and in 60.5% of the patients with ADPKD. Among the patients with familial GN and depression, only 9.6% were under antidepressants, but they were not regularly assisted by a professional specialized in mental health. None of the patients with ADPKD were using antidepressant medication nor undergoing therapy for treating depression.

In relation to the Beck inventory data, a statistically significant interaction between gender and time of diagnosis was observed (linear regression model, p = 0.019). The most common answers to the questions in the Beck depression inventory were: loss of libido, concerns about physical health, sleep disturbance, fatigue, and difficulty to work.

The worst dimensions of quality of life evaluated by the SF-36 in both groups corresponded to general health situation and emotional aspects. On the other hand, the best dimension was physical capacity.

A linear regression model was adjusted, taking demographic variables, clinical and laboratory evaluations into account, as well as the results of the anxiety, depression, and quality of life surveys. Results with $p < 0.05$ are presented in Tables 3 and 4 for the familial GN and ADPKD groups, respectively. No correlation was observed between the laboratory markers (proteinuria and serum creatinine) and anxiety, depression, and quality of life.

As for the familial GN group, whenever there was a one year increase in age, a reduction of 1.18 points was expected in the "physical" domain (p = 0.007). Physical capacity of non-Caucasian patients was better than the Caucasian group (p = 0.026). Gender was associated with vitality (p = 0.025). On average, male patients presented 21.4 ± 8.1 more points in vitality than the female patients (p = 0.011). Regarding mental status, it was observed that male patients presented on average 21.6 ± 7.0 more points than the female patients (p = 0.003).

Table 2 Levels of anxiety, depression, and quality of life of patients with familial GN and ADPKD. Data are presented as means ± SD, except when being expressed otherwise

Evaluated Parameters	Groups		p-value
	Familial GN (n = 52)	ADPKD (n = 38)	
STAI - state	39.5 ± 10.6	37.1 ± 10.8	0.296#
STAI - trait	47.9 ± 12.4	47.4 ± 12.6	0.849#
Beck mean (min. – max.)	7 (0 – 43)	11 (1 – 38)	0.011*
Beck (n of patients and %)			0.039**
No depression	34 (65.4%)	15 (39.5%)	
Mild to moderate	10 (19.2%)	17 (44.7%)	
Moderate to severe	6 (11.5%)	5 (13.2%)	
Severe	2 (3.8%)	1 (2.6%)	
SF-36			
Functional capacity	84.9 ± 17.5	83.7 ± 16.6	0.739#
Physical aspect	70.2 ± 39.9	71.1 ± 43.7	0.923#
Pain	75.8 ± 29.4	80.4 ± 31.5	0.479#
General health perception	54.7 ± 25.4	54.7 ± 23.3	0.999#
Vitality	64.6 ± 30.2	67.6 ± 29,0	0.633#
Social aspect	77.6 ± 30.4	68.4 ± 35,1	0.186#
Emotional aspect	56.4 ± 43.6	50.9 ± 45,7	0.561#
Mental health	68.8 ± 26.8	67.1 ± 25,4	0.749#

 # Student's *t* Test; ## χ^2;* Mann-Whitney Test; ** Generalization of Fisher Exact Test.

Table 3 Levels of anxiety, depression, and quality of life versus demographic data in patients with familial GN (only correlations of p < 0.05)

Familial GN (n = 52)	Mean ± SD	p-value
STAI - state		
Female	42.3 ± 10.0	p = 0.021#
Male	35.4 ± 10.3	
STAI - trait		
Female	51.4 ± 12.0	p = 0.011#
Male	42.7 ± 11.2	
Beck mean (min. – max.)		
Female	8 (1-30)	p = 0.013*
Male	3 (0-43)	
SF-36		
Functional capacity		
Female	81.0 ± 18.8	p = 0.035#
Male	90.7 ± 13.6	p = 0.001#
White	82.1 ± 18.8	
Non-White	94.2 ± 5.6	
Vitality		
Female	56.0 ± 31.1	p = 0.008#
Male	77.4 ± 24.4	
Mental health		
Female	60.1 ± 26.5	p = 0.003#
Male	81.7 ± 22.0	

Student's *t* Test; * Mann-Whitney Test.

Considering the ADPKD group, it was observed that whenever there was a one year increase in age, a reduction of 1.11 points in the body pain domain was expected (p = 0.004). Married patients presented on average 18.0 ± 7+8 more points of mental health than the single patients (p = 0.028).

Discussion

In the anxiety and depression inventories, the patients had a higher score in the parameters related to fatigue, lack of energy, decreased sexual function, sleep disturbance, difficulty in keeping professional activities and making decisions. Similar aspects were also observed in a review published by Kimmel.[26]

The highest anxiety scores were found among women and single patients, which is also in accordance with the findings of Andrade.[27] Women presented more depression and the worst scores in all quality of

Table 4 Levels of anxiety, depression, and quality of life *versus* demographic data in patients with ADPKD (only correlations of p < 0.05)

ADPKD (n = 38)	Mean (min. –max.)	p-value
STAI - trait		
Female	51 (23-73)	p = 0.016*
Male	36 (27-55)	
Formal Education∞		
(a)	55 (34-71)	p = 0.017†
(b)	48 (23-73)	
(c)	36 (30-67)	
Beck		
Female	13 (1-38)	p = 0.038*
Male	8 (1-16)	
Formal Education∞		
(a)	15 (6-38)	p = 0.010†
(b)	9.5 (1-16)	
(c)	7 (1-16)	
SF-36		
Functional capacity		
Formal Education∞		
(a)	75 (35-100)	p = 0.001†
(b)	90 (85-100)	
(c)	95 (80-100)	
Physical aspects		
Formal Education∞		
(a)	25 (0-100)	p = 0.035†
(b)	100 (0-100)	
(c)	100 (75-100)	
Pain		
Formal Education∞		
(a)	72 (0-100)	p = 0.017†
(b)	100 (41-100)	
(c)	100 (100-100)	
Mental health		
Formal Education∞		
(a)	68 (1-100)	p = 0.058†
(b)	80 (28-100)	
(c)	84 (44-92)	
Not married (mean ± SD) (single, separated, or divorced)	58.1 ± 26.6	p = 0.028#
Married (mean ± SD) (or living together)	76.0 ± 21.1	

 # Student's *t* Test; * Mann-Whitney Test; † Kruskal Wallis Test; SD: standard deviation; ∞ Formal Education: time devoted to formal education – (a) ≤ 8 years; (b) ≥ 8 and ≤ 11 years; (c) ≥ 11 years.

life domains. Similarly, some authors had previously observed that women's scores were worse than men's, possibly due to the loss of social support.[28]

It is noteworthy that anxiety scores (trait and state) of patients with familial GN and ADPKD were worse than the ones of patients with diabetes and women with family history of breast cancer in the United Kingdom.[29,30]

The patients in this study reported sleep disturbances in the Beck inventory. It was observed that such disorders are often associated with a higher risk of cardiovascular disease, and a high percentage of patients in hemodialysis silently suffer from sleep disturbances. Therefore, such condition has been underdiagnosed.[31] This profile certainly has several causes, including psychological problems, especially depression.[32] The present findings are in accordance with previous studies, since anxiety and depression have already been related to the poor quality sleep in patients who underwent renal transplant.[33]

It is worth to mention that depression is a psychiatric disorder that affects the general population at an estimated frequency of 3% to 5%. When associated with other clinical conditions, it determines a poorer prognosis, lower adherence, increased morbidity and mortality rates. Depression is often underdiagnosed and not treated properly,[8,11,34,35] even in patients with end-stage renal disease.[36,37] In a study carried out in Turkey, 24% of the 50 patients with end-stage renal disease suffered from depression.[38] Other studies show that 30% of patients with such disease suffered from depression, reinforcing that advanced stage of CKD is associated with a bad quality of life.[13,39] Besides, the risk of suicide is higher among these patients than in the general population.[40]

In the present study, depression was observed in 34.6% of familial GN cases and in 60.5% of ADPKD cases. Female patients with ADPKD presented higher levels of anxiety than the ones in the familial GN group. Both groups had a greater proportion of depressed patients than the CKD, hemodialysis and continuous ambulatory peritoneal dialysis groups in the study in Turkey (33.8%, 19.2%, and 12.8%, respectively).[41]

Data related to a more appropriate therapeutic approach for depression are scarcer, but the importance of selective serotonin reuptake inhibitor has been reported, cognitive-behavioral therapy and working with a group that offers social support for the depression treatment in patients with CKD; pharmacotherapy is always recommended. Among the strategies to treat anxiety and depression, as well as to improve quality of life, some studies suggest regular physical exercises. Social support is also considered to be a relevant aspect of the evolution of patients with CKD undergoing renal replacement therapy.[42] Both social and family support may cooperate to improve patients' conditions, and such approach is correlated to a better quality of life, increased compliance, satisfaction with physicians and caretakers, as well as increased level of religiousness and spirituality.[43,44] The observation that married patients with ADPKD presented better mental health compared to the single ones is also in accordance with such findings.

Anxiety and depression may have contributed to a higher morbidity rate, previously related among the recipients of renal transplants, which would not only imply a poor quality of life, but also a worse marital relationship, sexual functioning and sleep quality.[45]

Regarding the quality of life, it has also been described that anemia is associated with improvement in some of the aspects evaluated by SF-36, especially in the vitality domain of patients with stage 5 CKD.[46] In this study, the vitality of women with familial GN was inferior to men's. A possible explanation is that the vitality reduction in patients with CKD may be a consequence of anemia. However, this condition was not detected among the main comorbidities observed in both groups. Besides, no parameter in the physical examination or in the laboratory evaluation was associated with vitality.

It is interesting to observe that the scores of general health and emotional aspects of the patients analyzed in this study were worse than what has been described for individuals in hemodialysis in Brazil,[47] as well as for those with testicular cancer in Norway,[48] which demonstrates the influence of the studied conditions for these parameters.

The worst scores of trait anxiety, depression inventory, functional capacity, pain, physical, and mental health aspects were seen in patients with ADPKD. In this group, a lower schooling level was also observed. It is possible that these results are associated with the lower economic level and the consequent difficulty in accessing programs of kidney disease prevention, as well as the higher prevalence of malnutrition and depression.[49]

In relation to the reports of patients, the complaints usually referred to the health system as a whole, to the limitations imposed by the chronic condition of the disease and to the traumatic personal experiences, which could certainly influence the scores of the instruments used in the study.

Hence, anxiety, depression, and alterations in the quality of life should be evaluated in the full context of patients' inclusion. Sometimes these conditions may be connected to having a familial disease, or they are completely independent from such aspect.

In conclusion, it was considered that the patients and their relatives need psychological support to deal with anxiety, anger, guilt, depression, and acceptance of the diagnosis in cases of ADPKD.

Undoubtedly, patients with ADPKD should be seen by a nephrologist and a multidisciplinary nephrology team. The evaluation of anxiety, depression, and quality of life should be part of routine appointments with adequate and subsequent referral to mental health professionals. Therefore, it is expected that a proper treatment for psychiatric conditions improve the patient's well-being and evolution.[45]

To sum up, anxiety, depression, and the quality of life indicators of patients with familial renal disease are not usually evaluated in an adequate manner in the health sector, which does not allow a proper diagnosis of possible disorders. In the population studied by the authors of this article, depression, moderate trait anxiety and loss of quality of life, especially in relation to some of the evaluated aspects, were observed. These findings may affect the lack of adherence to the treatment, among other factors, which could indirectly contribute with the poor evolution of the renal disease. Ultimately, this situation is certainly harmful and may pose a vicious circle comprised of mental disorders and unsatisfying compliance.

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