

RECOMMENDATIONS

- 1) Initiation of early screening programs in the tertiary care centers, for detection of any psychiatric disorders among children and adolescents on haemodialysis using self reporting scales. They should be screened at the initiation of dialysis therapy, within 3 to 6 months after therapy initiation, and then yearly.
- 2) Training of pediatric psychologists to use screening scales on regular basis during the follow up sessions, especially among school aged children and adolescents.
- 3) Updating new screening scales and modifying it to Arabic forms to suit our Egyptian children on haemodialysis and to ensure proper assessment.
- 4) Adequate management of any psychiatric disorders detected in those children either by cognitive behavioral therapy or by medications.
- 5) Encourage the child or adolescent to participate in activities that improve his self-esteem and sense of mastery (i.e., encourage a child or adolescent who likes to draw to take an art class).
- 6) Discuss the importance of a healthy lifestyle (i.e., participating in regular physical activity, eating healthy foods) in maintaining a sense of well-being. In particular, regular physical activity should be discussed as an important element in any comprehensive treatment plan for adolescents with depressive symptoms.
- 7) Encourage the child or adolescent to interact with peers in a supportive environment (i.e., during after-school activities, in clubs or sports, at play dates (for younger children), through faith-based activities).
- 8) Academic support of children with CKD at schools to improve their performance and, therefore, decrease their psychiatric co-morbidities.
- 9) Clinicians should educate and counsel the families of those patients about anxiety and depression. Also they should develop a treatment plan with patients and families and set specific treatment goals in key areas of functioning including home, peer, and school settings.

REFERENCES

1. Vivar R, Pacheco Z, Adrianzen C, Macciotta B, Marchena C. Validation Birleson scale modified for depressive disorders in children and adolescents Peruvian. *Revista Peruana de Pediatría* 2005; 58: 24–30.
2. Lysaght MJ. Maintenance dialysis population dynamics: current trends and long-term implications. *J Am Soc Nephrol* 2002; 13:S37–40.
3. Chiang HH, Livneh H, Yen ML, Li TC, Tsai TY. Prevalence and correlates of depression among chronic kidney disease patients in Taiwan. *BMC Nephrol* 2013; 14:78.
4. Bilous RW, Lamb EJ, Coresh J, Levey AS, De Francisco AL, Riella MC. Disease: Improving Global Outcomes (KDIGO) CKD Work Group. KDIGO 2012 clinical practice guideline for the evaluation and management of chronic kidney disease. *Kidney Inter Suppl* 2013; 3: 1–150.
5. Stam H, Hartman EE, Deurloo JA, Groothoff J, Grootenhuis MA. Young adult patients with a history of pediatric disease: impact on course of life and transition into adulthood. *J Adolesc Health* 2006; 39:4–13.
6. Atencio BJ, Nucette E, Colina J, Sumaleye S, Gomez F, Hinestroza D. Evaluation of depression and anxiety in patients with renal insufficiency undergoing chronic hemodialysis. *Venezuelan Archives of Psychiatry and Neurology. Archivos Venezolanos de Psiquiatria y Neurologia* 2004; 50(103): 35–41.
7. Garralda ME, Jameson RA, Reynolds JM, Postlethwaite RJ. Psychiatric adjustment in children with chronic renal failure. *J Child Psychol Psychiatry* 1988; 29:79–90.
8. Hernandez EG, Loza R, Vargas H, Jara MF. Depressive symptomatology in children and adolescents with chronic renal insufficiency undergoing chronic dialysis. *Int J Nephrol* 2011; 2011: 1-7.
9. Bakr A, Amr M, Sarhan A, Hammad A, Ragab M, El-Refaey A, El-Mougy A. Psychiatric disorders in children with chronic renal failure. *Pediatr Nephrol* 2007; 22:128–31.
10. Berney-Martinet S, Key F, Bell L, Lepine S, Clermont MJ, Fombonne E. Psychological profile of adolescents with a kidney transplant. *Pediatr Transplant* 2009; 13:701–10.
11. Fukunishi I, Kudo H. Psychiatric problems of pediatric end-stage renal failure. *Gen Hosp Psychiatry* 1995; 17:32–6.
12. Eisenhauer GL, Arnold WC, Livingston RL. Identifying psychiatric disorders in children with renal disease. *South Med J* 1988; 81:572–6.
13. El Sadek SM, El-Shafee T, Zaher MM, Abd El-Salam M, Nouh MA. Anxiety and aggression disorders of chronic kidney disease on regular hemodialysis. *Life Sci J* 2013;10(3):598-603.

References

14. Wrong CS, Mak RH. Chronic kidney disease. In: Kher KK, Schaper HW, Makker SP (eds). *Clinical pediatric nephrology*. 2nded. London: Informa Healthcare; 2006. 339-52.
15. Sreedharan R, Avner E. Chronic kidney disease. In: Kliegman R, Stanton B, St GEME III J, Schor N, Behrman R (eds). *Nelson textbook of pediatrics*. 19thed. Philadelphia: Elsevier Saunders; 2011. 1822-5.
16. Gandhi B, Cheek S, Campo JV. Anxiety in the pediatric medical setting. *Child Adolesc Psychiatr Clin North Am* 2012; 21:643-53.
17. Garralda ME, Palanca MI. Psychiatric adjustment in children with chronic physical illness. *Br J Hosp Med* 1994; 52:230-4.
18. Beesdo K, Knappe S, Pine DS. Anxiety and anxiety disorders in children and adolescents: developmental issues and implications for DSM-V. *Psychiatr Clin North Am* 2009; 32:483-524.
19. Feroze U, Martin D, Reina-Patton A, Kalantar-Zadeh K, Kopplel DJ. Mental health, depression, and anxiety in patients on maintenance dialysis. *IJKD* 2010; 4:173-80.
20. Levy NB. What is psychonephrology?. *J Nephrol* 2008; 21(Suppl13):S51-3.
21. Fielding D, Brownbridge G. Factors related to psychological adjustment in children with end-stage renal failure. *Pediatr Nephrol* 1999; 13:766-70.
22. Iorga M, Starcea M, Munteanu M, Sztankovszky LZ. Psychological and social problems of children with chronic kidney disease. *Euro J Sci Theol* 2014; 10(1):179-88.
23. Hitchcocka PB, Brantleya PJ, Jonesa GN, McKnighta GT. Stress and social support as predictors of dietary compliance in hemodialysis patients. *Behav Med* 1992; 18(1):13-20.
24. Tjaden L, Tong A, Henning P, Groothoff J, Craig JC. Children's experiences of dialysis: a systematic review of qualitative studies. *Arch Dis Child* 2012; 97(5):395-402.
25. Sensky T. Depression in renal failure and its treatment. In: Robertson MM, Katona CLE (eds). *Depression and physical illness*. Chichester: John Wiley and Sons; 1997. 359-76.
26. Sacks CR, Peterson RA, Kimmel PL. Perception of illness and depression in chronic renal disease. *Am J Kidney Dis* 1990; 15: 31-9.
27. Vasilios K, Vasilios K. Depression in patients with CKD: a person centered approach. *J Psychol Psychother* 2012; S3: 1-5.
28. Friend R, Hatchett L, Wadhwa NK, Suh H. Serum albumin and depression in end-stage renal disease. *Adv Perit Dial* 1997; 13:155-7.

References

29. Fadrowski J, Cole SR, Hwang W, Fiorenza J, Weiss RA, Gerson A, et al. Changes in physical and psychosocial functioning among adolescents with chronic kidney disease. *Pediatr Nephrol* 2006; 21:394-9.
30. Agrawal S, Gollapudi P, Elahimehr R, Pahl MV, Vaziri ND. Effects of endstage renal disease and haemodialysis on dendritic cell subsets and basal and LPS stimulated cytokines production. *Nephrol Dial Transplant* 2010; 25:737-46.
31. Gill J, Luckenbaugh D, Charney D, Vythilingam M. Sustained elevation of serum interleukin-6 and relative insensitivity to hydrocortisone differentiates posttraumatic stress disorder with and without depression. *Biol Psychiatry* 2010;68(11):999-1006.
32. Simic Ogrizovic S, Jovanovic D, Dopsaj V, Radovic M, Sumarac Z, Bogavac SN, et al. Could depression be a new branch of MIA syndrome?. *Clin Nephrol* 2009;71(2):164-72.
33. Sonikian M, Metaxaki P, Papavasileiou D, Boufidou F, Nikolaou C, Vlassopoulos D, et al. Effects of interleukin-6 on depression risk in dialysis patients. *Am J Nephrol* 2010;31(4):303-8.
34. Knuth B, Radtke V, Rocha P, da Silva KS, Daldoglio F, Gazal M, et al. Prevalence of depression symptoms and serum levels of interleukin-6 in hemodialysis patients. *Psychiatry Clin Neurosci* 2014;68(4):275-82.
35. Teunissen SCCM, Wesker W, de Haes JCJM, Voest EE, de Graeff A. Symptom prevalence in patients with incurable cancer: a systematic review. *J Pain Symptom Manage* 2007;34: 94-104.
36. Lloyd-Williams M, Spiller J, Ward J. Which depression screening tools should be used in palliative care?. *Palliat Med* 2003; 17: 40-3.
37. Durkin I, Kearney M, O'Siorain L. Psychiatric disorder in a palliative care unit. *Palliat Med* 2003; 17: 212-8.
38. Meyer H, Sinott C, Seed P. Depressive symptoms in advanced cancer. Part 2 depression over time; the role of the palliative care professional. *Palliat Med* 2003; 17: 604-7.
39. Noorani N, Montagnini M. Recognizing depression in palliative care patients. *J Palliat Med* 2007; 10: 458-46.
40. Teunissen S, Graeff A, Voest E, Haes J. Are anxiety and depressed mood related to physical symptom burden? a study in hospitalized advanced cancer patients. *Palliat Med* 2007; 21: 341-6.
41. Hotopf M, Chidgey J, Addington-Hall J, Lan-Ly K. Depression in advanced disease a systematic review Part 1 prevalence and case finding. *Palliat Med* 2002; 16: 81-97.
42. Feroze U, Martin D, Kalantar-Zadeh K, Kim JC, Reina-Patton A, Kopple JD. Anxiety and depression in maintenance dialysis patients: preliminary data of a cross-sectional study and brief literature review. *J Ren Nutr* 2012; 22:207-10.

References

43. Cukor D, Coplan J, Brown C, Friedman S, Cromwell-Smith A, Peterson RA, et al. Depression and anxiety in urban hemodialysis patients. *Clin J Am Soc Nephrol* 2007; 2: 484-90.
44. Cukor D, Coplan J, Brown C, Peterson RA, Kimmel PL. Course of depression and anxiety diagnosis in patients treated with hemodialysis: a 16-month follow-up. *Clin J Am Soc Nephrol* 2008; 3:1752-8.
45. Lopes A, Bragg J, Young E, Goodkin D, Mapes D, Combe C, et al. Depression as a predictor of mortality and hospitalization among hemodialysis patients in the United States and Europe. *Kidney Int* 2002; 62(1): 199–207.
46. Hood KK, Huestis S, Maher A, Butler D, Volkening L, Laffel LM. Depressive symptoms in children and adolescents with type 1 diabetes: association with diabetes-specific characteristics. *Diabetes Care* 2006; 29:1389–91.
47. Seigel WM, Golden NH, Gough JW, Lashley MS, Sacker IM. Depression, self-esteem, and life events in adolescents with chronic diseases. *J Adolesc Health Care* 1990; 11:501–4.
48. Burke P, Meyer V, Kocoshis S, Orenstein DM, Chandra R, Nord DJ, et al. Depression and anxiety in pediatric inflammatory bowel disease and cystic fibrosis. *J Am Acad Child Adolesc Psychiatry* 1989; 28: 948–51.
49. Ettinger AB, Weisbrot DM, Nolan EE, Gadow KD, Vitale SA, Andriola MR, et al. Symptoms of depression and anxiety in pediatric epilepsy patients. *Epilepsia* 1998; 39:595–9.
50. Hood KK, Rausch JR, Dolan LM. Depressive symptoms predict change in glycemic control in adolescents with type 1 diabetes: rates, magnitude, and moderators of change. *Pediatr Diabetes* 2011; 12:718–23.
51. Hedayati SS, Minhajuddin AT, Toto RD, Morris DW, Rush AJ. Prevalence of major depressive episode in CKD. *Am J Kidney Dis* 2009; 54:424–32.
52. Drayer RA, Piraino B, Reynolds CF, Houck PR, Mazumdar S, Bernardini J, et al. Characteristics of depression in hemodialysis patients: symptoms, quality of life and mortality risk. *Gen Hosp Psychiatry* 2006; 28:306–12.
53. Young BA, von Korff M, Heckbert SR, Ludman EJ, Rutter C, Lin EHB, et al. Association of major depression and mortality in stage 5 diabetic chronic kidney disease. *Gen Hosp Psychiatry* 2010; 32:119–24.
54. Hedayati SS, Minhajuddin AT, Afshar M, Toto RD, Trivedi MH, Rush AJ. Association between major depressive episodes in patients with chronic kidney disease and initiation of dialysis, hospitalization, or death. *JAMA* 2010; 303(19):1946–53.
55. Hedayati SS, Bosworth HB, Briley LP, Sloa RJ, Pieper CF, Kimmel PL, et al. Death or hospitalization of patients on chronic hemodialysis is associated with a physician-based diagnosis of depression. *Kidney Int* 2008; 74: 930–6.

References

56. Hedayati SS, Grambow SC, Szczech LA, Stechuchak KM, Allen AS, Bosworth HB. Physician-diagnosed depression as a correlate of hospitalizations in patients receiving long-term hemodialysis. *Am J Kidney Dis* 2005; 46: 642–9.
57. Macaron G, Fahed M, Matar D, Bou-khalil R, Kazour F, Nehme–Chela D, et al. Anxiety, depression and suicidal ideation in Lebanese patients undergoing hemodialysis. *Community Ment Health J* 2014; 50(2): 235-8.
58. Johnson S, Dwyer A. Patient perceived barriers to treatment of depression and anxiety in hemodialysis patients. *Clin Nephrol* 2008; 69: 201-6.
59. Haggerty RJ, Roghmann KJ, Pless IB. *Child health and the community*. New York: Wiley Interscience; 1975.
60. Pless IB, Douglas JWB. Chronic illness in childhood, part I: epidemiological and clinical characteristics. *Pediatrics* 1971; 47:405–14.
61. Parker KP. Sleep and dialysis: a research-based review of the literature. *Anna J* 1997; 24:626-41.
62. Craven JL, Rodin GM, Johnson L, Kennedy SH. The diagnosis of major depression in renal dialysis patients. *Psychosom Med* 1987; 49: 482-92.
63. Grootenhuis MA, Stamm H, Last BF, Groothoff JW. The impact of delayed development on the quality of life of adults with end-stage renal disease since childhood. *Pediatr Nephrol* 2006; 21: 538-44.
64. Pao M, Bosk A. Anxiety in medically ill children/adolescents. *Depress Anxiety* 2011; 28:40-9.
65. Craske M, Rauch S, Andrews J, Bogels S, Friedman M, Simpson H, et al. Generalized anxiety disorders, diagnostic and statistical manual of mental disorders. 5thed. Arlington: American Psychiatric Association; 2013. 155-88.
66. Craske M, Rauch S, Andrews J, Bogels S, Friedman M, Simpson H, et al. Major depressive disorders, diagnostic and statistical manual of mental disorders. 5thed. Arlington: American Psychiatric Association; 2013. 155-88.
67. Whooley MA. Depression and cardiovascular disease: healing the broken-hearted. *JAMA* 2006; 295:2874–81.
68. Koo JR, Yoon JW, Kim SG, Lee YK, Oh KH, Kim GH, et al. Association of depression with malnutrition in chronic hemodialysis patients. *Am J Kidney Dis* 2003; 41:1037–42.
69. Weller EB, Weller RA, Rowan AB, Svadjian H. Depressive disorders in children and adolescents. In: Lewis M (ed). *Child and adolescent psychiatry: a comprehensive textbook*. Philadelphia: Lippincott Williams & Wilkins; 2002. 767–81.
70. Everett AV. Pharmacologic treatment of adolescent depression. *Curr Opin Pediatr* 2002; 14: 213–8.

References

71. Ryan ND. Medication treatment for depression in children and adolescents. *CNS Spectr* 2003; 8: 283–7.
72. Luby JL, Heffelfinger AK, Mrakotsky C. The clinical picture of depression in preschool children. *J Am Acad Child Adolesc Psychiatry* 2003; 42: 340–8.
73. Birmaher B, Williamson DE, Dahl RE. Clinical presentation and course of depression in youth: does onset in childhood differ from onset in adolescence?. *J Am Acad Child Adolesc Psychiatry* 2004; 43: 63–70.
74. Campo JV, Kingsley RS, Bridge J, Mrazek D. Child and adolescent psychiatry in general children's hospitals: a survey of chairs of psychiatry. *Psychosomatics* 2000; 41:128–33.
75. Otero S. Psychopathology and psychological adjustment in children and adolescents with epilepsy: Review article. *World J Pediatr* 2009; 5: 12-7.
76. Castaneda A, McCandless BR, Palermo DS. Children's Manifest Anxiety Scale (CMAS), Arabic form. By Elpeblawy VE, Eg Anglo library 1986.
77. Kovacs M. Children's Depression Inventory (CDI), Arabic form. By Ghareeb AG, Eg Anglo library 1995
78. Kovacs M. MHS Staff. Children's Depression Inventory (CDI): technical manual update. Toronto: Multi-Health Systems Inc.2003.
79. Mellika L. Stanford binet: Arabic version. 4thed. Cairo, Egypt: El-Nahda Press; 1998.
80. Fahmy S, El-Sherbini AF. Determining simple parameters for social classifications for health research. *Bull High Inst Public Health* 1983; 13:95–108.
81. Kotz S, Balakrishnan N, Read CB, Vidakovic B. *Encyclopedia of statistical sciences*. 2nded. Hoboken, New Jersey: Wiley-Interscience; 2006.
82. Kirkpatrick LA, Feeney BC. *A simple guide to IBM SPSS statistics for version 20.0*. Student ed. Belmont, Calif.: Wadsworth, Cengage Learning; 2013.
83. Marciano RC, Soares CM, Diniz JS, Lima EM, Silva JM, Canhestro MR, et al. Mental disorders and quality of life in pediatric patients with chronic kidney disease. *J Bras Nefrol* 2012;32(3):316-22.
84. Richardson LP, Lozano P, Russo J, McCauley E, Bush T, Katon W. Asthma symptom burden: relationship to asthma severity and anxiety and depression symptoms. *Pediatrics* 2006;118:1042-51.
85. Abdel Salam MM, Abdo MA, Yousef UM, Mohamed SA. Assessment of depression and anxiety in children on regular haemodialysis. *Egypt J Psychiatr* 2014; 35(2):100–4.

References

86. Gonzales FM, Pabico RC, Brown WH. Further experience with the use of routine intermittent hemodialysis in chronic renal failure. *Transaction. Am Soc Artif Intern Organs* 1963; 9: 11 .
87. Sqalli-Houssaini T, Ramouz I, Fahi Z, TahiriA, Sekkat FZ, Ouzeddoun N, et al. Effects of anxiety and depression on haemodialysis adequacy. *Nephrol Ther* 2005; 1:31–7.
88. Kiliś-Pstrusińska K, Medyńska A, Adamczak P, Bałasz- Chmielewska I. Anxiety in children and adolescents with chronic kidney disease – multicenter national study results. *Kidney Blood Press Res* 2013; 37: 579-87.
89. Perrin EC, Gerrity PS. There is a demon in your belly: children understanding of illness. *Pediatrics* 1981; 67:841–9.
90. Perrin EC, Gerrity PS. Development of children with a chronic illness. *Pediatr Clin North Am* 1984; 31:19–31.
91. Pless IB. Clinical assessment: physical and psychological functioning. *Pediatr Clin North Am* 1984; 31:33–45.
92. Dumitrescu AL, Gârneață L, Guzun O. Anxiety, stress, depression, oral health status and behaviours in Romanian hemodialysis patients. *Rom J Intern Med* 2009; 47:161–8.
93. Kohli S, Aggarwal HK. Psychological aspects of end-stage renal disease patients on maintenance hemodialysis. *Ind J Nephrol* 2007;16:15–8.
94. Kimmel PL, Peterson RA. Depression in patients with end-stage renal disease treated higher trait anxiety among the patients with dialysis: has the time to treat arrived?. *Clin J Am Soc Nephrol* 2006; 1: 349–52.
95. Cvengros JA, Christensen AJ, Lawton WJ. Health locus of control and depression in chronic kidney disease: a dynamic perspective. *J Health Psychol* 2005;10:677–86.
96. Sousa AD. Psychiatric issues in renal failure and dialysis. *Ind J Nephrol* 2008;18:47–50.
97. Holland J. Psychological aspects of cancer. In: Holland J, Frie E (eds). *Cancer medicine*. Philadelphia: Lea and Febiger; 1973. 991–1021.
98. Graham P. *Child psychiatry: a developmental approach*. 2nded. New York: Oxford University Press; 1991.
99. Plumb MM, Holland J. Comparative studies of psychological function in patients with advanced cancer. II-Interview errated current and past psychological symptoms. *Psychosom Med* 1981; 43:243–54.
100. Kogon AJ, Stoep AV, Weiss NS, Smith J, Flynn JT, McCauley E. Depression and its associated factors in pediatric chronic kidney disease *Pediatr Nephrol* 2013; 28(9): 1855–61.

References

101. Amr M, Bakr A, El Gilany AH, Hammad A, El-Refaey A, El-Mougy A. Multi-method assessment of behavior adjustment in children with chronic kidney disease. *Pediatr Nephrol* 2009; 24:341-7.
102. Park RJ, Goodyer IM. Clinical guidelines for depressive disorders in childhood and adolescence. *Eur Child Adolesc Psychiatry* 2000; 9(3): 147-61.
103. Sasaki T, Niitsu T, Hashimoto T, Kanahara N, Shina A, Hasegawa T, et al. Decreased Levels of Serum Brain-Derived Neurotrophic Factor in Male Pediatric Patients with Depression. *Open Clin Chem J* 2011;4: 28-33.
104. Bennett DS, Ambrosini PJ, Kudes D, Metz C, Rabinovich H. Gender differences in adolescent depression: do symptoms differ for boys and girls? *J Affect Disord* 2005; 89(1-3): 35-44.
105. McEwen B. Protecting and damaging effects of mediators of stress: Elaborating and testing the concepts of allostasis and allostatic load. *NY Acad Sci* 1999; 896:30-47.
106. Kimmel PL, Peterson RA, Weihs KL, Shidler N, Simmens SJ, Alleyne S, et al. Dyadic relationship conflict, gender and mortality in urban hemodialysis patients. *J Am Soc Nephrol* 2000; 11:1518-25.
107. Kiecolt-Glaser JK, Newton T, Cacioppo JT, MacCallum RC, Glaser R, Malarkey WB. Marital conflict and endocrine function: Are men really more physiologically affected than women?. *J Consult Clin Psychol* 1996; 64: 324-32.
108. World Health Organization (WHO). Value adolescents invest in the future. Geneva: WHO; 2003.
109. Centers for Disease Control and Prevention (CDC). Adolescent health. CDC 2011. Available from: <http://www.cdc.gov/healthyyouth/adolescenthealth/index.htm>. [Accessed On: 2 May, 2014].
110. Assadi F. Psychological impact of chronic kidney disease among children and adolescents: Not rare and not benign. *J Nephropathol* 2013; 2(1):1-3.
111. Depression in children from single-parent homes, 2014. Available from: <http://www.modernmom.com/bb96af02-3b45-11e3-8407-bc764e04a41e.html>.
112. Soliday E, Kool E, Lande MB. Family environment, child behavior, and medical indicators in children with kidney disease. *Child Psychiatry Hum Dev* 2001; 31(4): 279-95.
113. Mak RH. Chronic kidney disease in children: state of the art. *Pediatr Nephrol* 2007; 22(10):1687-8.
114. Wong H, Mylrea K, Feber J, Drukker A, Filler G. Prevalence of complications in children with chronic kidney disease according to KDOQI. *Kidney Int* 2006; 70:585-90.

References

115. Koshy SM, Geary DF. Anemia in children with chronic kidney disease. *Geary Pediatr Nephrol* 2008; 23:209–19.
116. Morris KP, Sharp J, Watson S, Coulthard MG. Non-cardiac benefits of human recombinant erythropoietin in end stage renal failure and anaemia. *Arch Dis Child* 1993; 69: 580–6.
117. Lopes AA, Albert JM, Young EW, Satayathum S, Pisoni RL, Andreucci VE, et al. Screening for depression in hemodialysis patients: associations with diagnosis, treatment, and outcomes in the DOPPS. *Kidney Int* 2004;66: 2047-53.
118. Davies SJ, Bryan J, Phillips L, Russell GI. The predictive value of KT/V and peritoneal solute transport in CAPD patients is dependent on the type of comorbidity present. *Perit Dial Int.* 1996; 16(Suppl 1): S158–62.
119. Lew SQ, Piraino B. Psychosocial factors in patients with chronic kidney disease: quality of life and psychological issues in peritoneal dialysis patients. *Semin Dial* 2005; 18(2): 119–23.
120. Strik JJ, Denollet J, Lousberg R, Honig A. Comparing symptoms of depression and anxiety as predictors of cardiac events and increased health care consumption after myocardial infarction. *J Am College Cardiol* 2003; 42(10): 1801–7.
121. Kimmel PL, Peterson RA, Weihs KL, Simmens SJ, Alleyne S, Cruz I, et al. Multiple measurements of depression predict mortality in a longitudinal study of chronic hemodialysis outpatients. *Kidney Int* 2000; 57(5): 2093–8.
122. Bloembergen WE, Stannard DC, Port FK, Wolfe RA, Pugh JA, Jones CA, et al. Relationship of dose of hemodialysis and cause-specific mortality. *Kidney Int* 1996; 50(2): 557–65.
123. Katon W, Lozano P, Russo J, McCauley E, Richardson L, Bush T. The prevalence of DSM-IV anxiety and depressive disorders in youth with asthma compared with controls. *J Adolesc Health* 2007; 41:455-63.
124. Kovacs M, Goldston D, Obrosky DS, Bonar LK. Psychiatric disorders in youths with IDDM: rates and risk factors. *Diabetes Care* 1997; 20: 36–44.
125. Soliday E, Kool E, Land MB. Psychosocial adjustment in children with kidney disease. *J Pediatr Psychol* 2000; 25: 93-10.
126. Seyle H. *Stress without distress*. Philadelphia: WB Lippincott Co; 1974.
127. Fielding D, Brownbridge G. Factors related to psychosocial adjustment in children with end-stage renal failure. *Pediatr Nephrol* 1999; 13(9): 766-70.
128. El Nahas AM, Bello AK. Chronic kidney disease: the global challenge. *Lancet* 2005; 365: 331-40.
129. Acheson D. *Independent Inquiry into Inequalities in health report*. London: Stationery Office; 1999.
130. Macintyre S, Maciver S, Sooman A. Area, class and health: should we focusing on places or people? *J Social Policy* 1993; 22:213-34.

المخلص العربي

حدوث الفشل الكلوي المزمن خلال مرحلة الطفولة له تأثير نفسي واجتماعي على الأطفال وأسرهم. الأطفال الذين يعانون من الفشل الكلوي المزمن يعانون من مرض ليس له علاج معروف ويتطلب التعديل اليومي لنمط الحياة لذلك غالبا ما يعانون من تأخر في النمو وتغير في صورة الجسم، وكثيرا ما يتغيرون عن المدرسة والأنشطة الأخرى، مما يؤثر على النمو النفسي لهؤلاء الأطفال.

وكان الهدف من الدراسة الحالية هو تقدير مدى انتشار القلق والاكتئاب بين الأطفال الذين يعانون من الفشل الكلوي المزمن و الذين يجرون غسيل كلوي ودراسة بعض عوامل الخطر التي قد تؤثر على انتشار القلق والاكتئاب بين هؤلاء الأطفال.

وقد تم إجراء هذه الدراسة على ٥٥ طفلا تتراوح أعمارهم بين (٧-١٨) سنة وليس لديهم أي ظروف طبية أو جراحية مزمنة أخرى؛ لاستبعاد القلق والاكتئاب المصاحبين لأي مرض مزمن آخر.

و قد تم استخدام مقاييس الإبلاغ الذاتي بما في ذلك مقياس القلق الظاهر للأطفال (CMAS) واكتئاب الأطفال على نطاق المخزون (CDI) لتقييم أعراض القلق والاكتئاب بين هؤلاء الأطفال.

و قد أظهرت هذه الدراسة انه من بين ٥٥ طفلا، جميع الأطفال تم تشخيصها بالقلق من بينهم ١١ طفل (٢٠%) يعانون من قلق منخفض، و ٢٢ طفل (٤٠%) يعانون من قلق متوسط، ٢٢ طفل (٤٠%) يعانون من قلق مرتفع.

فيما يتعلق بالاكتئاب، كان هناك ١٧ طفل (٣٠.٩%) يعانون من الاكتئاب المنخفض و ١٨ طفل (٣٢.٧%) يعانون من الاكتئاب المتوسط، و ٥ أطفال (٩.١%) يعانون من الاكتئاب المرتفع.

و لقد وجدنا علاقة دالة إحصائية بين انتشار القلق ومدة الغسيل الكلوي ($p \text{ value} = 0.045$)، والوضع الاجتماعي والاقتصادي ($p \text{ value} = 0.047$)، فيما يتعلق بالاكتئاب، وجدنا علاقة دالة إحصائية بين انتشار الاكتئاب و العمر ($p \text{ value} = 0.04$)، نسبة الهيموجلوبين بالدم ($p \text{ value} = 0.02$)، ولكن لم نجد علاقة ذات دلالة إحصائية بين القلق أو الاكتئاب وعوامل خطر أخرى بما في ذلك؛ الجنس، مكان الإقامة، فقر الدم، حضور المدرسة، التكوين الأسري المتكامل، وجود مرض الكلي في احد أفراد العائلة، وجود صديق مقرب يثق فيه، كفاءة الغسيل الكلوي و عدد جلسات غسيل الكلى/ الأسبوع.

و نستنتج أن هناك زيادة كبيرة في انتشار معدل القلق و الاكتئاب بين الأطفال الذين يعانون من فشل كلوي مزمن و يجرون غسيل كلوي بالمقارنة بدراسات أخرى في بلدان أجنبية وهنا تظهر أهمية المعايير الاجتماعية والاقتصادية في مصر وتأثيرها الكبير على نفسية تلك الأطفال.

وأيضا هناك علاقة ذات دلالة إحصائية بين القلق و مدة الغسيل الكلوي و (KtV)، الوضع الاجتماعي والاقتصادي. كما الصدد فيما يخص الاكتئاب، هناك علاقة ذات دلالة إحصائية بين العمر ومقدار الهيموجلوبين، في حين لم يتم العثور على علاقة ذات دلالة إحصائية بين الاكتئاب والقلق وعوامل الخطر الأخرى مثل الجنس، مكان الإقامة، فقر الدم، حضور المدرسة، التكوين الأسري المتكامل، وجود مرض الكلي في احد أفراد العائلة، وجود صديق مقرب، كفاءة الغسيل الكلوي و عدد جلسات غسيل الكلى / الأسبوع.

لذلك نوصي بالرصد المنتظم للقلق والاكتئاب بين الأطفال المصابين بالاعتلال الكلوي المزمن والذين يجرون غسيل كلوي باستخدام مقاييس الفحص الذاتي و تدريب الأطباء النفسيين للأطفال علي استخدام مقاييس الفحص الذاتي على أسس منظمة خلال جلسات المتابعة، وخاصة بين الأطفال والمراهقين في سن المدرسة كما يوصي انه يجب أيضا علي الأطباء النفسيين توعية أهل هؤلاء المرضى بمرض القلق و الاكتئاب و طريقة التعامل معهم. ويوصى أيضا بتحديث مقاييس الفحص الجديدة وتعديلها لأشكال عربية تناسب مع الأطفال المصريين؛ لضمان التقييم السليم. في الوقت نفسه، نوصي بدراسة عدد أكبر من الأطفال المصابين بالاعتلال الكلوي المزمن و الذين يجرون غسيل كلوي في مصر. أخيرا يجب أن يكون هناك دعم أكاديمي لهؤلاء الأطفال في المدارس لتحسين أدائهم، وبالتالي التقليل من مشاكلهم النفسية.

دراسة اعتلالات التوتر والاكئاب في الاطفال المصابين بالفشل الكلوي المزمن و الذين يجرون غسيل كلوى بالإسكندرية

رسالة علمية

مقدمة لكلية الطب – جامعة الإسكندرية
إيفاءً جزئياً لشروط الحصول على درجة

الماجستير فى طب الأطفال

مقدمة من

ايمان احمد فؤاد اسماعيل حلمي

بكالوريوس الطب والجراحة – جامعة الإسكندرية

كلية الطب
جامعة الإسكندرية
٢٠١٤

دراسة اعتلالات التوتر والاكنتاب في الاطفال المصابين بالفشل الكلوي المزمن و الذين يجرون غسيل كلوى بالإسكندرية

مقدمة من

ايمان احمد فؤاد اسماعيل حلمي

بكالوريوس الطب والجراحة- الإسكندرية

للحصول على درجة

الماجستير فى طب الأطفال

موافقون

.....

لجنة المناقشة والحكم على الرسالة

أ.د/ حسين حسني عبد الدايم

أستاذ الاطفال

كلية الطب

جامعة الإسكندرية

.....

أ.د/ طارق السيد اسماعيل عمر

أستاذ الاطفال

كلية الطب

جامعة الإسكندرية

.....

أ.د/ مدحت صلاح الدين محمد عطية

استاذ الصحة النفسية

المعهد العالي للصحة العامة

جامعة الاسكندرية

التاريخ:

السادة المشرفون

.....

أ.د/ حسين حسنى عبد الدايم

أستاذ طب الأطفال

كلية الطب

جامعة الإسكندرية

المشرف المشارك

.....

د/ حنان محمد فتحى عبد المطلب

مدرس طب الأطفال

كلية الطب

جامعة الإسكندرية