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# 肾移植受者生活质量和健康素养现状调查及影响因素分析\*

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**摘要 目的:**调查肾移植受者生活质量(QOL)、健康素养(HL)现状,并分析其 QOL、HL 的影响因素。**方法:**选择我院 2015 年 1 月~2016 年 1 月收治的 369 例肾移植受者为研究对象,采用自制问卷结合病历信息的方式收集入选患者的临床资料,分别采用健康状况调查简表(SF-36)、中文版成人快速健康素养评估量表(REALAM-T)对肾移植受者的 QOL、HL 的现状进行调查,并分析肾移植受者 QOL、HL 的影响因素。**结果:**369 例肾移植受者 QOL 评分为(561.08±54.95)分,HL 评分为(62.75±5.26)分,其中 288 例(78.05%)患者处于 HL 充足水平,56 例(15.18%)患者处于 HL 临界水平,25 例(6.78%)患者处于 HL 缺乏水平。单因素分析结果显示,不同婚姻状况、家庭人均月收入、文化程度、费用支付方式、移植肾来源、移植术后时间的肾移植受者 QOL 评分比较差异有统计学意义( $P<0.05$ );不同家庭人均月收入、文化程度、费用支付方式、移植肾来源、移植术后时间的肾移植受者 HL 评分比较差异有统计学意义( $P<0.05$ )。多元线性回归分析显示,家庭人均月收入、费用支付方式、移植肾来源、移植术后时间是肾移植受者 QOL 的影响因素( $P<0.05$ ),文化程度、移植肾来源、移植术后时间是肾移植受者 HL 的影响因素( $P<0.05$ )。**结论:**肾移植受者 QOL 较差,HL 整体不高,家庭人均月收入、费用支付方式、移植肾来源、移植术后时间是肾移植受者 QOL 的影响因素,文化程度、移植肾来源、移植术后时间是肾移植受者 HL 的影响因素,临床应根据以上因素采取针对性的措施,以提高肾移植受者的 QOL 和 HL。

**关键词:**肾移植;生活质量;健康素养;影响因素

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## Survey on the Quality of Life and Health Literacy of Renal Transplant Recipients and Analysis of Influencing Factors\*

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**ABSTRACT Objective:** To survey the quality of life (QOL) and health literacy (HL) of renal transplant recipients, and to analyze the influencing factors of QOL and HL. **Methods:** 369 renal transplant recipients who were admitted to our hospital from January 2015 to January 2016 were selected as subjects of study. The clinical data of selected patients were collected by self-made questionnaire combined with medical record information. The status of QOL and HL in renal transplant recipients were investigated by using medical outcomes study 36-Item short-form health survey (SF-36) and the adult rapid health literacy assessment scale (REALAM-T) respectively. The influencing factors of QOL and HL in renal transplant recipients were analyzed. **Results:** The QOL score of 369 renal transplant recipients was (561.08±54.95), HL score was (62.75±5.26). Among them, 288 cases (78.05%) were at HL adequacy level, 56 cases (15.18%) were at HL critical level, and 25 cases (6.78%) were at HL deficiency level. Univariate analysis showed that there were significant differences in QOL scores among renal transplant recipients with different marital status, family income per capita, education level, payment method, source of kidney transplant and time after transplantation ( $P<0.05$ ). There were significant differences in HL scores among different family income per capita, education level, payment method, source of transplanted kidney and time after transplantation ( $P<0.05$ ). Multivariate linear regression analysis showed that family income per capita, payment method, source of transplanted kidney and time after transplantation were the influencing factors of QOL ( $P<0.05$ ). The education level, source of transplanted kidney and time after transplantation were the influencing factors of HL in renal transplant recipients ( $P<0.05$ ). **Conclusion:** The QOL of kidney transplant recipients is poor, the overall level of HL is not high. The family income per capita, payment method, source of transplanted kidney and the time after transplantation are the influencing factors of renal transplant recipients' QOL. The education level, the source of transplanted kidney and the time after transplantation are the influencing factors of renal transplant recipients' HL. The clinical measures should be taken according to the above factors to improve the level of QOL and HL of renal transplant recipients.

**Key words:** Renal transplant; Quality of life; Health literacy; Influencing factors

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## 前言

终末期肾病(End stage renal disease, ESRD)的最佳治疗方法是肾移植,相比透析方法,成功的肾移植不仅可以提高患者的生活质量(Quality of life, QOL),而且可以延长患者的寿命<sup>[1-3]</sup>。目前,我国每年死于 ESRD 的患者高达 73.5 万人,而肾移植手术每年可达 10000 例以上,且递增速度较快;肾移植受者由于受到器官来源不易、治疗费用昂贵、自身医学知识欠缺、术后移植排斥反应等的影响,往往会产生巨大的压力,从而对其身体健康造成严重威胁<sup>[4,5]</sup>。QOL 又称为生命质量,其可用于全面评价患者生活的优劣<sup>[6,7]</sup>。健康素养(Health literacy, HL)是指个人通过不同途径获取和理解健康信息,并使用这些信息去增加自身健康的能力<sup>[8,9]</sup>。有报道显示,肾移植受者的 QOL、HL 与患者疾病的转归及预后密切相关<sup>[10,11]</sup>,因此,探讨肾移植受者 QOL、HL 的影响因素具有重要的临床意义<sup>[12,13]</sup>。本研究通过分析肾移植受者 QOL、HL 的现状及其影响因素,以为肾移植受者 QOL、HL 的提高提供依据,现报道如下。

## 1 对象与方法

### 1.1 研究对象

以我院 2015 年 1 月~2016 年 1 月收治的 369 例肾移植受者为研究对象,纳入标准:(1)所有患者均接受了肾移植术;(2)病因均为慢性肾功能不全引起的尿毒症;(3)无其它影响治疗的严重疾病,如心功能不全、肿瘤、自身免疫性疾病;(4)患者神志清晰,沟通能力良好;(5)患者及其家属愿意配合完成本研究,且签署同意书。排除标准:(1)合并心、脑、肺等重要器官损害者;(2)合并有其它器官移植者;(3)病历资料不完整者。

### 1.2 方法

(1)采用自制问卷结合病历信息的方式收集肾移植受者的年龄、性别、婚姻状况、家庭人均月收入、文化程度、费用支付方式、移植肾来源、移植前透析方式以及移植术后时间等临床资料。(2)采用健康状况调查简表(Medical Outcomes Study 36-Item Short-Form Health Survey, SF-36)对肾移植受者的 QOL 现状进行调查。SF-36 包括生理功能(Physiological function, PF)、生理职能(Physiological requirement, RP)、躯体疼痛(Body pain, BP)、一般健康(General health, GH)、精力(Vitality, VT)、社会功能(Social function, SF)、情感职能(Role emotional, RE)和精神健康(Mental health, MH)8 个维度,共 36 个条目,各维度评分为 0~100 分,总评分为各维度评分之和,分值越高表示患者 QOL 越好<sup>[14]</sup>。(3)采用中文版成人快速健康素养评估量表(Adult Rapid Health Literacy Assessment Scale, REALM-T)对肾移植受者的 HL 现状进行调查<sup>[15]</sup>,REALM-T 包括 69 个肾移植相关知识,这些知识都是肾移植医生期望患者掌握的内容,调查者请肾移植受者阅读并解释这些名词,然后对其阅读的发音与解释的正确性进行评估,认识该词汇评为 1 分,不认识或不清楚该词汇评为 0 分,满分为 69 分。HL 分为 3 个等级:60~69 分表示 HL 处于充足水平;45~59 分表示 HL 处于临界水平;≤ 44 分表示 HL 处于缺乏水平。

### 1.3 统计学处理

采用 SPSS20.0 软件进行数据分析,计量资料以( $\bar{x} \pm s$ )表

示,采用 t 检验;计数资料以%表示,采用  $\chi^2$  检验;采用单因素和多元线性回归分析方法分析肾移植受者的 QOL、HL 的影响因素。以  $P < 0.05$  为差异有统计学意义。

## 2 结果

### 2.1 肾移植受者 QOL、HL 现状

369 例肾移植受者 QOL 评分为( $561.08 \pm 54.95$ )分,其中 PF 维度评分为( $82.13 \pm 7.94$ )分,RP 维度评分为( $61.24 \pm 9.78$ )分,BP 维度评分为( $83.32 \pm 6.71$ )分,GH 维度评分为( $60.63 \pm 6.52$ )分,VT 维度评分为( $69.23 \pm 5.21$ )分,SF 维度评分为( $63.46 \pm 5.17$ )分,RE 维度评分为( $61.24 \pm 6.68$ )分,MH 维度评分为( $79.83 \pm 6.91$ )分。369 例肾移植受者 HL 评分为( $62.75 \pm 5.26$ )分,其中 288 例(78.05%)患者处于 HL 充足水平,56 例(15.18%)患者处于 HL 临界水平,25 例(6.78%)患者处于 HL 缺乏水平。

### 2.2 肾移植受者 QOL、HL 影响因素的单因素分析

单因素分析结果显示,不同婚姻状况、家庭人均月收入、文化程度、费用支付方式、移植肾来源、移植术后时间的肾移植受者 QOL 评分比较差异有统计学意义( $P < 0.05$ ),而不同性别、年龄、移植前透析方式的肾移植受者 QOL 评分比较差异无统计学意义( $P > 0.05$ );不同家庭人均月收入、文化程度、费用支付方式、移植肾来源、移植术后时间的肾移植受者 HL 评分比较差异有统计学意义( $P < 0.05$ );而不同性别、年龄、婚姻状况、移植前透析方式的肾移植受者 HL 评分差异无统计学意义( $P > 0.05$ )。

### 2.3 肾移植受者 QOL、HL 影响因素的多元线性回归分析

以 QOL、HL 评分为因变量,以单因素分析中有统计学差异的因素为自变量进行多元线性回归分析,结果显示,家庭人均月收入、费用支付方式、移植肾来源、移植术后时间为肾移植受者 QOL 的影响因素( $P < 0.05$ );文化程度、移植肾来源、移植术后时间为肾移植受者 HL 的影响因素( $P < 0.05$ )。见表 2、3。

## 3 讨论

SF-36 是国际上评估 QOL 最常用的量表,其内容容易被理解,评估结果可靠且所需时间短<sup>[16-18]</sup>。高水平的 QOL 是促进肾移植受者手术恢复的前提。REALM-T 是临床用来评估肾移植受者 HL 的常用量表,其由主管医生期望患者掌握的肾移植医学知识组成,采用该表调查肾移植受者对这些医学知识关键词的发音及内容解释的正确性,能够了解患者对这些医学知识的理解程度与不足<sup>[19,21]</sup>。充足水平的 HL 是指患者能够较好地掌握肾移植术后相关知识,并用这些知识改变自己的生活方式,从而可以提高术后身体的恢复速度<sup>[22,24]</sup>。肾移植受者的生理、心理、社会状态以及对疾病治疗的积极参与、对肾移植医学健康知识的掌握程度等均是影响其恢复的重要因素<sup>[25]</sup>,因此,研究肾移植受者 QOL、HL 的现状及其影响因素具有重要意义。

有研究表明,中国常模 QOL 评分为( $631.95 \pm 36.65$ )分<sup>[26]</sup>,而本研究结果显示,369 例肾移植受者 QOL 评分为( $561.08 \pm 54.95$ )分,提示肾移植受者的 QOL 水平较低,肾移植术后患者的 QOL 受到了严重影响。分析其原因可能是因为肾移植术后患者的身体受到了一定的创伤,同时患者需要服用免疫抑制药物,昂贵的医疗费用以及对疾病知识的匮乏等都将对患者的 QOL

表 1 肾移植受者 QOL、HL 影响因素的单因素分析

Table 1 Univariate analysis of influencing factors of QOL and HL in renal transplant recipients

| Factors                                  |                                  | n   | QOL score<br>(scores) | F/t   | P     | HL score<br>(scores) | F/t    | P     |
|------------------------------------------|----------------------------------|-----|-----------------------|-------|-------|----------------------|--------|-------|
| Gender                                   | male                             | 269 | 560.64± 54.12         | 0.252 | 0.801 | 62.47± 6.16          | 1.467  | 0.143 |
|                                          | female                           | 100 | 562.26± 57.18         |       |       | 63.50± 5.53          |        |       |
| Age (years)                              | ≤ 45                             | 211 | 561.35± 55.18         | 0.109 | 0.913 | 62.13± 5.24          | 1.043  | 0.943 |
|                                          | >45                              | 158 | 560.72± 54.64         |       |       | 63.58± 4.29          |        |       |
| Marital status                           | Married                          | 209 | 580.18± 60.53         | 6.090 | 0.000 | 62.30± 5.21          | 0.428  | 0.669 |
|                                          | Divorcee                         | 13  | 544.24± 53.25         |       |       | 62.83± 5.24          |        |       |
|                                          | Widowed spouse                   | 8   | 556.32± 50.33         |       |       | 61.54± 5.27          |        |       |
| Family income<br>per capita(yuan )       | Unmarried                        | 139 | 563.53± 55.69         | 2.232 | 0.026 | 63.49± 5.32          | 5.693  | 0.000 |
|                                          | ≤ 2000                           | 122 | 550.34± 52.27         |       |       | 60.24± 6.78          |        |       |
| Education level                          | >2000                            | 247 | 563.92± 56.27         | 2.224 | 0.027 | 63.99± 5.50          | 11.858 | 0.000 |
|                                          | Junior high school and below     | 112 | 551.40± 50.79         |       |       | 58.98± 5.15          |        |       |
|                                          | High School and Secondary School | 142 | 563.54± 56.33         |       |       | 63.37± 5.23          |        |       |
| Payment method                           | College and above                | 115 | 567.47± 57.73         | 3.847 | 0.016 | 65.65± 3.10          | 9.901  | 0.000 |
|                                          | Public expense                   | 81  | 567.82± 51.14         |       |       | 65.15± 3.86          |        |       |
| Source of kidney<br>transplant           | Medical insurance                | 236 | 560.29± 53.17         | 7.309 | 0.000 | 63.17± 4.43          | 8.104  | 0.000 |
|                                          | At their own expense             | 52  | 554.19± 60.54         |       |       | 57.12± 5.49          |        |       |
| Dialysis before<br>transplantation       | Donor                            | 313 | 547.32± 83.46         | 0.071 | 0.943 | 61.63± 5.15          | 1.415  | 0.158 |
|                                          | Relatives                        | 56  | 637.99± 96.28         |       |       | 67.82± 5.87          |        |       |
| Time after<br>transplantation<br>(month) | Hemodialysis                     | 307 | 561.07± 54.12         | 0.041 | 0.041 | 62.63± 5.13          | 5.262  | 0.000 |
|                                          | Peritoneal dialysis              | 25  | 560.15± 55.34         |       |       | 62.56± 5.98          |        |       |
|                                          | Hemodialysis,peritoneal dialysis | 37  | 561.75± 55.39         |       |       | 63.86± 3.67          |        |       |
|                                          | <12                              | 311 | 546.88± 50.16         |       |       | 61.94± 5.21          |        |       |
|                                          | 12~24                            | 31  | 567.23± 53.74         | 2.048 | 0.041 | 66.98± 1.66          | 5.262  | 0.000 |
|                                          | >24                              | 27  | 567.87± 60.95         |       |       | 67.23± 0.91          |        |       |

表 2 肾移植受者 QOL 影响因素的多元线性回归分析

Table 2 Multivariate linear regression analysis of influencing factors of QOL in renal transplant recipients

| Factors                     | Regression<br>coefficient | Standard error | Standard regression<br>coefficient | t     | P     |
|-----------------------------|---------------------------|----------------|------------------------------------|-------|-------|
| Family income per capita    | 1.764                     | 0.653          | 0.158                              | 5.015 | 0.027 |
| Payment method              | 1.657                     | 0.863          | 0.209                              | 4.974 | 0.031 |
| Source of kidney transplant | 1.432                     | 0.517          | 0.317                              | 5.244 | 0.021 |
| Time after transplantation  | 1.574                     | 0.576          | 0.291                              | 2.748 | 0.029 |

表 3 肾移植受者 HL 影响因素的多元线性回归分析

Table 3 Multivariate linear regression analysis of influencing factors of HL in renal transplant recipients

| Factors                       | Regression<br>coefficient | Standard error | Standard regression<br>coefficient | t     | P     |
|-------------------------------|---------------------------|----------------|------------------------------------|-------|-------|
| Education level               | 1.851                     | 0.753          | 0.258                              | 4.227 | 0.023 |
| Source of transplanted kidney | 1.376                     | 0.473          | 0.269                              | 5.152 | 0.028 |
| Time after transplantation    | 1.584                     | 0.615          | 0.357                              | 3.468 | 0.032 |

造成影响,因此肾移植受者在术后其 QOL 明显降低<sup>[27]</sup>。369 例肾移植受者 HL 评分为(62.75± 5.26)分,其中 288 例(78.05%)患者处于 HL 充足水平,56 例(15.18%)患者处于 HL 临界水平,25 例(6.78%)患者处于 HL 缺乏水平,提示肾移植术后处于 HL 不足水平的患者仍占有较高比例,这可能也是影响患者术后 QOL 及身体恢复的一个重要原因。单因素分析结果显示,不同婚姻状况、家庭人均月收入、文化程度、费用支付方式、移植肾来源、移植术后时间的肾移植受者 QOL 评分比较差异有统计学意义( $P<0.05$ ),多元线性回归分析结果显示,家庭人均月收入、费用支付方式、移植肾来源、移植术后时间为肾移植受者 QOL 的影响因素。分析其原因可能是家庭人均月收入直接对患者的生活花费造成了影响,家庭人均月收入低的患者很难承担肾移植的费用,从而使其存在较大的经济负担,并造成较大的心理、生理压力,进而影响患者的 QOL<sup>[28]</sup>;相比费用支付方式为自费的患者,费用支付方式为公费或者医保的患者降低了自己医疗费用的支出,减轻了患者的压力,从而其 QOL 得到提高;肾移植的来源直接影响了移植的效果,来自于亲属的肾源更容易移植,且对患者造成的免疫排斥反应较低;随着移植术后时间的延长,移植肾对患者身体逐渐适应,患者也逐渐恢复, QOL 得到提高<sup>[29]</sup>。单因素结果显示,不同家庭人均月收入、文化程度、费用支付方式、移植肾来源、移植术后时间的肾移植受者 HL 评分比较差异有统计学意义( $P<0.05$ ),多元线性回归分析结果显示,文化程度、移植肾来源、移植术后时间为肾移植受者 HL 的影响因素。分析其原因可能是因为文化程度较高的患者能够更好的了解疾病相关知识,有助于提升患者的 HL;而移植肾的来源为亲属,使得其与患者的匹配度较高,免疫排斥反应较低,从而加强了肾移植受者对康复的信心,进而可以使其更积极地提高自身 HL;随着患者肾移植术后时间的延长,患者对相关知识的了解逐渐增多,其 HL 也相应提高<sup>[30]</sup>。值得注意的是本研究由于受病例选择、研究人力及时间等的限制导致研究结果可能存在一定的偏倚,后续将扩大样本量、增加随访时间进行进一步研究,以为临床肾移植受者的 QOL、HL 的提高提供更加可靠的依据。

综上所述,肾移植受者 QOL 偏低,HL 整体不高,家庭人均月收入、费用支付方式、移植肾来源、移植术后时间是肾移植受者 QOL 的影响因素,文化程度、移植肾来源、移植术后时间是肾移植受者 HL 的影响因素,在肾移植过程中应重视上述因素,并给予针对性的改善措施,以提高患者 QOL、HL 水平。

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