doi: 10.13241/j.cnki.pmb.2018.09.031

血液透析和腹膜透析对终末期肾病患者预后的影响及其安全性比较 *

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摘要 目的：分析和比较血液透析和腹膜透析终末期肾病患者预后的影响及其安全性。**方法：**选取2010年1月至2016年4月本医院收治的透析患者246例作为研究对象，将其分为血液透析组和腹膜透析组，比较两组患者治疗后的生存情况及并发症的发生情况。**结果：**两组患者死亡原因是心力衰竭、消化道出血、重度感染、脑梗死，两组的病死率及死因构成比较差异均无统计学意义(P＞0.05)。腹膜透析组患者1年、3年、5年生存率均显著高于血液透析组(P＜0.05)，两组患者7年生存率比较差异无统计学意义(P＞0.05)。首次透析年龄超过60岁的终末期肾病患者中，腹膜透析组1年、3年、5年、7年生存率均显著低于血液透析组(P＜0.05)。血液透析组心力衰竭、动静脉内瘘闭塞发生率显著高于腹膜透析组(P＜0.05)，腹膜透析组腹膜炎的发生率显著高于血液透析组(P＜0.05)，血液透析组总并发症发生率明显高于腹膜透析组(P＜0.05)。**结论：**血液透析和腹膜透析各有优缺点，对终末期肾病患者应个体化选择透析方式，减少并发症，提高生活质量及生存率。

关键词：终末期肾病；血液透析；腹膜透析；并发症；预后

中图分类号：R692.5；R459.5 **文献标识码：**A **文章编号：**1673-6273(2018)09-1746-04

Comparison of the Prognosis and Safety of Patients with End-stage Renal Disease Undergoing Hemodialysis and Peritoneal Dialysis*

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ABSTRACT Objective: To compare the effect of hemodialysis and peritoneal dialysis on the prognosis and safety of patients with end-stage renal disease (ESRD). **Methods:** 246 patients with dialysis in our hospital from January 2010 to April 2016 were selected and divided into two groups: hemodialysis group and peritoneal dialysis group, the survival and incidence of complications were compared between the two groups. **Results:** The causes of death in both groups were heart failure, gastrointestinal bleeding, severe infection, cerebral infarction, and the fatality rate and cause of death showed no statistically significant difference (P>0.05). The 1-year, 3-year and 5-year survival rates of ESRD patients in the peritoneal dialysis group were significantly higher than those of the hemodialysis group (P<0.05), no statistical difference was found in the 7-year survival rate between two groups (P>0.05). For the first time in over 60 years of age in patients with end-stage renal disease, the 1-year, 3-year, 5-year and 7-year survival rates were significantly lower than those of the hemodialysis group(P<0.05). The incidence of heart failure, arteriovenous fistula occlusion of hemodialysis group were higher than those of the peritoneal dialysis group (P<0.05), the incidence of peritonitis in peritoneal dialysis group was higher than that of the hemodialysis group (P<0.05), the total complication rate in the hemodialysis group was higher than that of the peritoneal dialysis group (P<0.05). **Conclusion:** Hemodialysis and peritoneal dialysis had their own advantages and disadvantages, we should choose the mode of dialysis for patients with end-stage renal disease, reduce the complications, improve the quality of life and the survival rate.

Key words: End stage renal disease; Hemodialysis; Peritoneal dialysis; Complication; Prognosis

Chinese Library Classification(CLC): R692.5; R459.5 Document code: A

Article ID: 1673-6273(2018)09-1746-04

前言

近年来，随着社会的发展、人们生活方式的改变以及人口老龄化的加剧，终末期肾病(end-stage renal disease，ESRD)患病率逐年升高，已经成为严重威胁人类健康的重大疾病[1]。终末期肾病主要的治疗方法包括血液透析(hemodialysis，HD)、腹膜透析(peritoneal dialysis，PD)和肾脏移植，由于中国的经济发展水平尚不发达，移植肾源比较局限，所以肾脏移植开展较少，多数终末期肾病患者均选择了透析治疗[2]。由于终末期肾病患者病因多种多样，病情错综复杂，而且血液透析和腹膜透析各有优缺点，所以对终末期肾病患者选择何种透析方法对于提高患者的生存率及生活质量具有至关重要的意义[3]。本研究对终末期

* 基金项目：广西壮族自治区卫生厅科研基金项目(Z20153988)

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(收稿日期：2017-06-30 接受日期：2017-07-23)

肾病患者血液透析和腹膜透析的并发症及预后进行比较分析，旨在为临床个体化治疗提供理论依据。

1 对象与方法

1.1 研究对象

选取 2010 年 1 月至 2016 年 4 月本医院收治的透析患者 246 例作为研究对象，纳入标准：(1)所有患者均符合终末期肾病的诊断标准[4]；(2)肾小球滤过率不足 15 mL/min，均需要进行透析治疗；(3)患者透析前生命体征稳定，一般情况良好；(4)依从性好，按照要求进行透析治疗，并配合定期随访观察。排除标准：(1)患者合并严重感染；(2)合并脑出血、心肌梗塞等心脑血管疾病；(3)合并恶性肿瘤；(4)治疗期间进行肾脏移植。按照透析方式不同，将 246 例透析患者分为血液透析组和腹膜透析组，其中血液透析组：共 158 例患者，男性 85 例，女性 73 例，平均年龄(54.50± 13.50)岁，病因包括高血压肾病 27 例(17.09%)，慢性肾小球肾炎 35 例(22.15%)，糖尿病肾病 42 例(26.58%)，慢性间质性肾炎 50 例(31.65%)，梗阻性肾病 4 例(2.53%)；腹膜透析组：共 88 例患者，男性 47 例，女性 41 例，平均年龄(53.45± 12.50)岁，包括高血压肾病 15 例(17.05%)，慢性肾小球肾炎 19 例(21.59%)，糖尿病肾病 23 例(26.14%)，慢性间质性肾炎 30 例(34.09%)，梗阻性肾病 1 例(1.13%)。两组人群在性别、年龄、病因构成方面比较均无统计学差异(P>0.05)，两组资料均衡性较好，具有可比性。

1.2 治疗方法

血液透析组和腹膜透析组两组均常规控制血压、血糖，并补充钙、铁、红细胞生成素等。血液透析组采用常规碳酸氢盐血液透析方法进行透析，每次透析时间为 4 个小时，每周透析三次，治疗时间为 7~35 个月，期间根据患者个体实际情况进行超滤量和超滤模式的调整；腹膜透析组采用美国 Baxter 公司双联双袋系统和低钙透析液进行透析，根据患者腹膜平衡试验和腹透超滤量来制定适宜个体的透析方案，每次采用透析液 2000 mL，每天透析 4 次，治疗时间为 7~35 个月，期间根据患者个体实际情况进行透析方案调整。

1.3 并发症

透析期间通过采血化验、CT 检查、彩超检查及细菌培养等发现患者并发症情况。

1.4 随访

自患者开始透析后即开始随访，采用电话、门诊方式随访，随访截止时间为 2017 年 3 月或者至患者死亡。

1.5 统计学分析

调查问卷数据采用 EpiData 3.0 软件进行录入，核对无误以后采用 SPSS 19.0 统计软件包进行统计分析。计量资料用均数± 标准差($\bar{x}$± s)表示，其比较采用方差分析；计数资料采用例数(百分比)表示，其比较采用卡方(x^2)检验；生存率比较采用 Kaplan-Meier 法，统计学检验水准取双侧 α=0.05。

2 结果

2.1 血液透析组和腹膜透析组终末期肾病患者透析期间并发症的发生情况比较

本研究对血液透析组和腹膜透析组终末期肾病患者透析期间的并发症比较，结果显示：血液透析组心力衰竭、动静脉内瘘闭塞发生率高于腹膜透析组(P＜0.05)，腹膜透析组腹膜炎发生率高于血液透析组(P＜0.05)，血液透析组总并发症发生率高于腹膜透析组(P＜0.05)，两组间其他并发症的发生情况比较差异无统计学意义(P＞0.05)，见表 1。

表 1 血液透析组和腹膜透析组透析期间的并发症的发生情况比较(n，%)

Table 1 Comparison of the incidence of complications during hemodialysis between hemodialysis group and peritoneal dialysis group(n，%)

Complication	Hemodialysis group (158 cases)	Peritoneal dialysis group (88 cases)	x^2 value	P value
Heart failure	49(31.01)	7(7.95)	17.092	0.000
Arteriovenous fistula occlusion	30(18.99)	0(0)	19.030	0.000
Peritonitis	0(0)	6(6.82)	11.042	0.001
Pulmonary infection	5(3.16)	1(1.14)	0.311	0.577
Digestive tract bleeding	21(13.29)	10(11.36)	0.191	0.662
Subcutaneous hemorrhage	23(14.56)	11(12.50)	0.201	0.654
Cerebral infarction	16(10.13)	3(3.41)	3.579	0.059
Total complication rate	95(60.13)	28(31.82)	18.117	0.000

2.2 血液透析组和腹膜透析组终末期肾病患者预后比较

本研究自患者开始透析后开始随访，随访截止时间为 2017 年 3 月或者至患者死亡，随访时间为 5~87 个月，中位随访时间为 68 个月，随访期间发现血液透析组死亡 34 例(21.52%)，腹膜透析组死亡 18 例(20.45%)，死亡原因是心力衰竭(血液透析组 19 例，腹膜透析组 10 例)、消化道出血(血液透析组 8 例，腹膜透析组 5 例)、重度感染(血液透析组 4 例，腹膜透析组 2 例)、脑梗死(血液透析组 3 例，腹膜透析组 1 例)，两组的病死率及死因构成均无统计学差异(P＞0.05)。血液透析组和腹膜透析组终末期肾病患者 1 年生存率分别为 91.25%和 100%，3 年生存率分别为 82.50%和 96.42%，5 年生存率分别为 81.46%和 89.50%，7 年生存率分别为 78.15%和 79.63%，腹膜透析组终末期肾病患者 1 年生、3 年、5 年生存率均显著高于血液透析组且均具有统计学差异(P＜0.05)，未发现两组的 7 年生

存率具有统计学差异(P＞0.05)。见图 1。排除年龄因素的影响进行亚组分析发现，首次透析年龄超过 60 岁的终末期肾病患者，血液透析组和腹膜透析组 1 年生存率分别为 90.65%和 81.42%,3 年生存率分别为 81.05%和 72.13%,5 年生存率分别为 75.58%和 57.40%,7 年生存率分别为 63.47%和 38.56%,分析发现腹膜透析组 1 年、3 年、5 年、7 年生存率均显著低于血液透析组且均具有统计学差异(P＜0.05)。

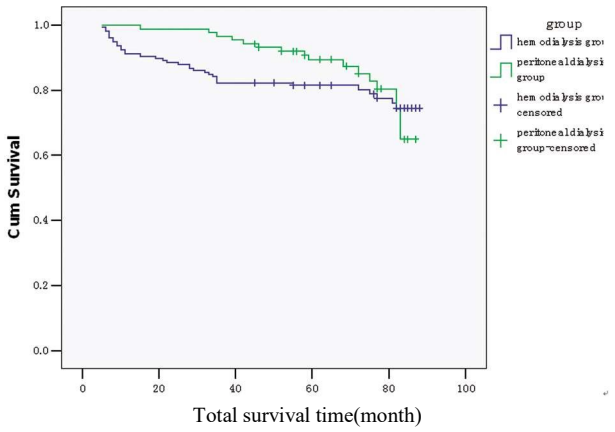

图 1 血液透析组和腹膜透析组的生存情况比较

Fig.1 Comparison of the survival between hemodialysis group and peritoneal dialysis group

3 讨论

终末期肾病是由于肾脏功能衰竭或者丧失导致机体不能通过肾脏将体内的代谢废物及过多的水分排出体外,引起机体一系列生理生化功能紊乱或者障碍的临床综合征,属于肾衰竭进展的末期阶段,也就是尿毒症期[5-7]。透析治疗是目前对终末期肾病患者进行治疗并维系生命的主要方式,主要包括血液透析和腹膜透析[8]。本研究对终末期肾病患者血液透析和腹膜透析的并发症的发生情况及预后进行了比较分析。

本研究对血液透析组和腹膜透析组终末期肾病患者透析期间的并发症发生情况进行比较，发现血液透析组心力衰竭、动静脉内瘘闭塞发生率高于腹膜透析组,血液透析组患者更容易发生心力衰竭,可能原因是由于建立动静脉内瘘增高了患者发生心力衰竭的风险[9]。腹膜透析组腹膜炎发生率高于血液透析组且,这与 Hung 等人[10]的研究结果一致,可能是由于患者无菌观念比较差，不规范的技术操作导致外源性的感染引起的[11]。血液透析和腹膜透析各有优缺点,但腹膜透析组在总并发症发生率方面明显低于血液透析。

本研究随访时间为 5~87 个月，中位随访时间为 68 个月，随访期间发现血液透析组死亡 34 例(21.52%),腹膜透析组死亡 18 例(20.45%),死亡原因是心力衰竭、消化道出血、重度感染、脑梗死,两组的病死率及死因构成均无统计学差异,这与 Chen 等人[12]的研究结果一致。透析导致终末期肾病死亡原因是心力衰竭、消化道出血、重度感染、脑梗死。Huang 等[13]的研究显示选择血液透析的终末期肾病患者在初始透析的 2 年内,其死亡率高于选择腹膜透析的患者,而随后持续透析的 2~4 年内死亡率低于腹膜透析患者，也有研究显示透析龄超过 10 年的终末期肾病患者,选择血液透析的患者其死亡风险明显低于选择腹膜透析的患者[14-17]。本研究中,血液透析组和腹膜透析组终末期肾病患者 1 年生存率分别为 91.25%和 100%,3 年生存率分别为 82.50%和 96.42%,5 年生存率分别为 81.46%和 89.50%,7 年生存率分别为 78.15%和 79.63%,腹膜透析组终末期肾病患者 1 年、3 年、5 年生存率均显著高于血液透析组。排除年龄因素的影响进行亚组分析，发现首次透析年龄超过 60 岁的终末期肾病患者,腹膜透析组 1 年、3 年、5 年、7 年生存率均显著低于血液透析组，其原因可能是首次透析年龄超过 60 岁的终末期肾病患者由于年龄较大,导致更容易发生感染等并发症从而导致死亡,所以选择透析时的年龄也是影响选择何种透析方式的重要影响因素[18-20]。

综上所述,血液透析导致终末期肾病患者心力衰竭、动静脉内瘘闭塞发生率高,腹膜透析导致腹膜炎发生率高,腹膜透析 1 年、3 年、5 年生存率均显著高于血液透析，首次透析年龄超过 60 岁的终末期肾病患者宜选择血液透析。因此,对终末期肾病患者应个体化选择透析方式,减少并发症,提高生活质量及生存率。

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