

World Journal of *Transplantation*

World J Transplant 2022 September 18; 12(9): 281-312



MINIREVIEWS

- 281 Growing challenge of post-liver transplantation non-alcoholic fatty liver disease
Kalogirou MS, Giouleme O
- 288 Liver transplantation during COVID-19: Adaptive measures with future significance
Gyftopoulos A, Ziogas IA, Montenovo MI

ORIGINAL ARTICLE**Retrospective Cohort Study**

- 299 Vitamin D deficiency may predispose patients to increased risk of kidney transplant rejection
Buyukdemirci S, Oguz EG, Cimen SG, Sahin H, Cimen S, Ayli MD

LETTER TO THE EDITOR

- 310 Simultaneous kidney transplantation and ipsilateral native nephrectomy in patients with autosomal dominant polycystic kidney disease
Gadelkareem RA, Abdelgawad AM, Mohammed N

ABOUT COVER

Editorial Board Member of *World Journal of Transplantation*, Ahmed M Zidan, MD, MSc, PhD, Associate Professor, Surgeon, Consultant of General, HBP and Transplant Surgery, Assiut University Hospital, Assiut 7111, Egypt. ahmed.zidan@med.au.edu.eg

AIMS AND SCOPE

The primary aim of *World Journal of Transplantation* (WJT, *World J Transplant*) is to provide scholars and readers from various fields of transplantation with a platform to publish high-quality basic and clinical research articles and communicate their research findings online.

WJT mainly publishes articles reporting research results obtained in the field of transplantation and covering a wide range of topics including bone transplantation, brain tissue transplantation, corneal transplantation, descemet stripping endothelial keratoplasty, fetal tissue transplantation, heart transplantation, kidney transplantation, liver transplantation, lung transplantation, pancreas transplantation, skin transplantation, etc.

INDEXING/ABSTRACTING

The WJT is now abstracted and indexed in PubMed, PubMed Central, Scopus, Reference Citation Analysis, China National Knowledge Infrastructure, China Science and Technology Journal Database, and Superstar Journals Database.

RESPONSIBLE EDITORS FOR THIS ISSUE

Production Editor: Yi-Xuan Cai; **Production Department Director:** Xu Guo; **Editorial Office Director:** Jia-Ping Yan.

NAME OF JOURNAL

World Journal of Transplantation

ISSN

ISSN 2220-3230 (online)

LAUNCH DATE

December 24, 2011

FREQUENCY

Monthly

EDITORS-IN-CHIEF

Maurizio Salvadori, Sami Akbulut, Vassilios Papalois, Atul C Mehta

EDITORIAL BOARD MEMBERS

<https://www.wjgnet.com/2220-3230/editorialboard.htm>

PUBLICATION DATE

September 18, 2022

COPYRIGHT

© 2022 Baishideng Publishing Group Inc

INSTRUCTIONS TO AUTHORS

<https://www.wjgnet.com/bpg/gerinfo/204>

GUIDELINES FOR ETHICS DOCUMENTS

<https://www.wjgnet.com/bpg/gerinfo/287>

GUIDELINES FOR NON-NATIVE SPEAKERS OF ENGLISH

<https://www.wjgnet.com/bpg/gerinfo/240>

PUBLICATION ETHICS

<https://www.wjgnet.com/bpg/gerinfo/288>

PUBLICATION MISCONDUCT

<https://www.wjgnet.com/bpg/gerinfo/208>

ARTICLE PROCESSING CHARGE

<https://www.wjgnet.com/bpg/gerinfo/242>

STEPS FOR SUBMITTING MANUSCRIPTS

<https://www.wjgnet.com/bpg/gerinfo/239>

ONLINE SUBMISSION

<https://www.f6publishing.com>



Simultaneous kidney transplantation and ipsilateral native nephrectomy in patients with autosomal dominant polycystic kidney disease

Rabea Ahmed Gadelkareem, Amr Mostafa Abdelgawad, Nasreldin Mohammed

Specialty type: Transplantation

Provenance and peer review:

Unsolicited article; Externally peer reviewed.

Peer-review model: Single blind

Peer-review report's scientific quality classification

Grade A (Excellent): 0
Grade B (Very good): B
Grade C (Good): C
Grade D (Fair): 0
Grade E (Poor): 0

P-Reviewer: Sachdeva S, India;
Sureshkumar KK, United States

Received: June 22, 2022

Peer-review started: June 22, 2022

First decision: July 12, 2022

Revised: July 14, 2022

Accepted: August 25, 2022

Article in press: August 25, 2022

Published online: September 18, 2022



Rabea Ahmed Gadelkareem, Amr Mostafa Abdelgawad, Nasreldin Mohammed, Department of Urology, Assiut Urology and Nephrology Hospital, Faculty of Medicine, Assiut University, Assiut 71515, Egypt

Corresponding author: Rabea Ahmed Gadelkareem, MD, Assistant Professor, Department of Urology, Assiut Urology and Nephrology Hospital, Faculty of Medicine, Assiut University, Elgamaa Street, Assiut 71515, Egypt. dr.rabeagad@yahoo.com

Abstract

The simultaneous kidney transplantation and ipsilateral native nephrectomy for autosomal dominant polycystic kidney disease does not seem to be associated with increased rates of comorbidity and complications. This outcome can efficiently be achieved when the indication and surgical approach of native nephrectomy are properly justified.

Key Words: Autosomal dominant polycystic kidney disease; Kidney transplantation; Native nephrectomy; Retroperitoneal approach; Surgical complications

©The Author(s) 2022. Published by Baishideng Publishing Group Inc. All rights reserved.

Core Tip: The current results showed that simultaneous kidney transplantation (KT) and ipsilateral native nephrectomy for autosomal dominant polycystic kidney disease is not associated with higher rates of comorbidity and complications. However, the indications should be justified to include forming a sufficient surgical space, such as with huge kidneys, alleviating symptoms, such as with infected cysts and accessing preemptive KT. On the other hand, the retroperitoneal surgical approach of the native nephrectomy should be employed, despite the anatomical challenges of approaching the native kidney from the same approach as the transplantation procedure.

Citation: Gadelkareem RA, Abdelgawad AM, Mohammed N. Simultaneous kidney transplantation and ipsilateral native nephrectomy in patients with autosomal dominant polycystic kidney disease. *World J Transplant* 2022; 12(9): 310-312

URL: <https://www.wjgnet.com/2220-3230/full/v12/i9/310.htm>

DOI: <https://dx.doi.org/10.5500/wjt.v12.i9.310>

TO THE EDITOR

We read with interest the article by Darius *et al*[1], who studied the effect of the simultaneous ipsilateral native nephrectomy and kidney transplantation (KTIN) in a cohort of 154 patients with autosomal dominant polycystic kidney disease (ADPKD). This procedure was performed in 77 patients who were compared with another 77 patients who had KT alone. The authors addressed certain points in this issue such as the indications, preoperative and perioperative variables and complications. They concluded that KTIN is a safe strategy without a negative impact on the rates of surgical comorbidity, complications and graft survival.

We agree with the authors' conclusions that generally KTIN for ADPKD may not increase the rates of comorbidity and complications of KT. Also, we believe that this surgical strategy has very important practical implications on the field of KT, proving the surgical feasibility and safety of one-stage surgery, non-affection of graft survival and a high patient satisfaction. Despite the numerous studies that have reported these outcomes, there are many unresolved controversies that still warrant further studying due to the insufficient evidence-based proofs in the literature[2-5].

In light of the results of this study, relevant literature status and our own experience, we will address some practical points that are crucially relevant to this subject. These points may contribute to the verification of the advantageous implications of KTIN on the KT practice, especially the living donor KT. Although our routine policy is to perform KTIN for ADPKD patients, we have encountered a few serious comorbidities and complications in those patients. We present this brief experience in the purpose of strengthening the focus and attention to the unfavorable sequels of KTIN to avoid them, but not to argue against the results reported by the authors or the growing evidence of the advantages of this strategy in the literature[5].

The authors addressed the common indications of KTIN in the symptomatic patients and they were similar to those indications reviewed and mentioned in the literature without much controversy. They included creating a surgical space for the graft as a cardinal indication, intractable renal pain, significant hematuria, intra cyst infections and hemorrhage, gastrointestinal symptoms such as early satiety, recurrent kidney stones, risk of malignancy and preemptive KT strategy[1,2,5]. Similarly, the current results revealed that the rate of KTIN was higher in patients who had preemptive KT[1]. The latter KT strategy is now an important issue in the literature representing a prominent indication of KTIN in patients with ADPKD, especially with the living donor KT. In regards to the asymptomatic patients who have a possibility of accessing preemptive KT, the number of surgeries can be reduced and the residual kidney functions and diuresis can be preserved until the time of KT surgery[4].

As the authors stated in their methods, the retroperitoneal surgical approach should be used to avoid the involvement of the peritoneal cavity and its contents. In the case of transperitoneal nephrectomy, lymphorrhea and hypoalbuminemia may represent serious complications, threatening the graft and patient survival. We had a serious experience with 2 cases of transperitoneal bilateral KTIN for ADPKD. The indications of the transperitoneal approach were the need of bilateral native nephrectomy and a history of previous surgery on the native kidneys. Prolonged lymphorrhea and hypoalbuminemia represented serious challenges in the management of one of our patients. Also, a very rare incident of pathology in the form of concomitant ADPKD and primary oxalosis was confirmed in the other patient. Both patients died with septicemia after a consecutive series of comorbidity and complications that were empowered by the transperitoneal approach. Hence, we may mention that the safety of KTIN is not absolute, especially when another major pathology coexists. In concordance, many drawbacks have been reported, including the prolongation of the time of surgery, increased need of blood transfusion and increased rates of early urinary tract infections[3]. On the other hand, bilateral native nephrectomy may have advantages when approached *via* the laparoscopic and robotic-assisted techniques in these cases, but the challenges and outcomes of these techniques are still controversial[6-8]. In any case, all of these unfavorable effects warrant proper surgical planning and prompt management of the medical and surgical sequels evolving during the perioperative period which may have a great effect on the whole of KT outcomes.

A recent systematic review by Xu *et al*[5] reached similar conclusions in regards to the vascular complications and safety of KTIN. This meta-analysis revealed that there was no evidence to support that the KTIN procedure increases the rates of the perioperative mortality and complications[5]. Finally, we believe that this study can be considered a step forward in providing cumulative strong evidence for the superiority of KTIN against the staged surgery. Accordingly, we should recommend a critical justification of the indications and timing of the native nephrectomy in patients with ADPKD

undergoing KT. Also, the retroperitoneal approach should be strictly used in these cases. Finally, efficient and meticulous hemostasis and ligation of the renal lymphatics should be performed.

FOOTNOTES

Author contributions: Gadelkareem RA searched and collected the data; Abdelgawad AM contributed in scientific review and revision of the letter; Gadelkareem RA, Abdelgawad AM and Mohammed N wrote and revised the letter; and all authors revised and approved the letter for submission.

Conflict-of-interest statement: All the authors report no relevant conflicts of interest for this article.

Open-Access: This article is an open-access article that was selected by an in-house editor and fully peer-reviewed by external reviewers. It is distributed in accordance with the Creative Commons Attribution NonCommercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited and the use is non-commercial. See: <https://creativecommons.org/licenses/by-nc/4.0/>

Country/Territory of origin: Egypt

ORCID number: Rabea Ahmed Gadelkareem 0000-0003-4403-2859; Amr Mostafa Abdelgawad 0000-0002-4336-1573; Nasreldin Mohammed 0000-0002-0232-9497.

S-Editor: Wang JJ

L-Editor: Filipodia

P-Editor: Wang JJ

REFERENCES

- 1 **Darius T**, Bertoni S, De Meyer M, Buemi A, Devresse A, Kanaan N, Goffin E, Mourad M. Simultaneous nephrectomy during kidney transplantation for polycystic kidney disease does not detrimentally impact comorbidity and graft survival. *World J Transplant* 2022; **12**: 100-111 [PMID: 35663541 DOI: 10.5500/wjt.v12.i5.100]
- 2 **Glassman DT**, Nipkow L, Bartlett ST, Jacobs SC. Bilateral nephrectomy with concomitant renal graft transplantation for autosomal dominant polycystic kidney disease. *J Urol* 2000; **164**: 661-664 [PMID: 10953121 DOI: 10.1097/00005392-200009010-00011]
- 3 **Veroux M**, Zerbo D, Basile G, Gozzo C, Sinagra N, Giaquinta A, Sanfiorenzo A, Veroux P. Simultaneous Native Nephrectomy and Kidney Transplantation in Patients With Autosomal Dominant Polycystic Kidney Disease. *PLoS One* 2016; **11**: e0155481 [PMID: 27257690 DOI: 10.1371/journal.pone.0155481]
- 4 **Jänigen BM**, Hempel J, Holzner P, Schneider J, Fichtner-Feigl S, Thomusch O, Neeff H, Pisarski P, Glatz T. Simultaneous ipsilateral nephrectomy during kidney transplantation in autosomal dominant polycystic kidney disease: a matched pair analysis of 193 consecutive cases. *Langenbecks Arch Surg* 2020; **405**: 833-842 [PMID: 32705344 DOI: 10.1007/s00423-020-01939-3]
- 5 **Xu J**, D'Souza K, Lau NS, Leslie S, Lee T, Yao J, Lam S, Sandroussi C, Chadban S, Ying T, Pleass H, Laurence JM. Staged versus concurrent native nephrectomy and renal transplantation in patients with autosomal dominant polycystic kidney disease: A systematic review. *Transplant Rev (Orlando)* 2022; **36**: 100652 [PMID: 34688508 DOI: 10.1016/j.trre.2021.100652]
- 6 **Abrol N**, Bentall A, Torres VE, Prieto M. Simultaneous bilateral laparoscopic nephrectomy with kidney transplantation in patients with ESRD due to ADPKD: A single-center experience. *Am J Transplant* 2021; **21**: 1513-1524 [PMID: 32939958 DOI: 10.1111/ajt.16310]
- 7 **Collini A**, Benigni R, Ruggieri G, Carmellini PM. Laparoscopic Nephrectomy for Massive Kidneys in Polycystic Kidney Disease. *JSLs* 2021; **25** [PMID: 33879988 DOI: 10.4293/JSLs.2020.00107]
- 8 **Rofaief G**, Molnar MZ, Baker N, Campsen J, Kim R. Robotic-assisted Kidney Transplantation With Simultaneous Bilateral Nephrectomies Is an Efficient, Feasible, and Safe Way to Manage Patients With Renal Failure Secondary to Adult Polycystic Kidney Disease. *Transplant Direct* 2021; **7**: e740 [PMID: 34386577 DOI: 10.1097/TXD.0000000000001195]



Published by **Baishideng Publishing Group Inc**
7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA

Telephone: +1-925-3991568

E-mail: bpgoffice@wjgnet.com

Help Desk: <https://www.f6publishing.com/helpdesk>

<https://www.wjgnet.com>

