Adequacy of Therapeutic Effort as a Crucial Competence in Nephrology: Case Report

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https://doi.org/10.71749/pkj.97

Abstract

The current availability of multiple life support technologies, like chronic kidney support in an outpatient setting, frequently masks fragile conditions and complicates the process of decision-making in end-of-life. To avoid disproportionate interventions that prolong suffering, adequacy of therapeutic effort (ATE) is a process that aligns therapeutic interventions with the patient's clinical status, prognosis and wishes, respecting the natural course of life. In this paper, we present a case of a 44-year-old female with critical heart and kidney failure for which an ATE process was applied along the patient's clinical course. In the end, we review the main barriers to ATE implementation. Training palliative care competencies among professionals and developing guidelines and juridical clarification sessions can be crucial pillars for the implementation of ATE in the Nephrology field. This topic is of particular importance, especially in a country like Portugal, where renal replacement therapy remains highly prevalent.

Keywords: Advance Care Planning; Advance Directives; Kidney Failure, Chronic; Terminal Care; Withholding Treatment

INTRODUCTION

Could Willem Kolff, in September 1945, foresee the challenges that a decision to suspend dialysis could entail in the 21st century? Moved to save lives, maybe this was not easy, especially during the Second World War *a*nd the German occupation of the Netherlands.[1] However, time has passed and technological progress in medical practice altered the way of facing death.[2] The growing availability of life support options raised ethical conflicts regarding the right to dignity in dying.[3] In the field of Nephrology, the current opportunity to provide chronic support for a vital organ in an outpatient setting with satisfactory outcomes frequently masks fragile conditions. However, kidney support can quickly turn disproportionate if, at some point, causes loss of functionality, disproportionate pain or suffering for a patient who truly has terminal organ failure.[4]

The term Adequacy of Therapeutic Effort (ATE) is recognized as the process of adapting diagnostic-therapeutic measures indicated for a patient, according to his/her clinical situation and prognosis.[5] This include not applying or withdrawing disproportional treatments or therapeutic procedures in patients experiencing advanced and irreversible disease, preventing suffering and agony while respecting the natural course of life.[2]

Knowing that dialysis patients are particularly more susceptible to aggressive intervention in end-of-life care[6] (EoLC), our objective with this paper is to present a clinical case in which a situation of ATE is addressed by working together with a palliative care team.[7]

CASE REPORT

This is the case of a 44-year-old female who moved from her birthplace (Nigeria) to Madrid in 2013. She has congestive heart failure due to restrictive cardiomyopathy associated with an MYH7 gene mutation, atrial fibrillation and hypertension. Since 2018, she had been under the care of a specialized Heart Failure team. However, despite being on high doses of diuretics, she was hospitalized multiple times due to hypervolemia. Social problems (like three children in their care with serious economic insufficiency) and low adherence to therapy were identified and addressed as risk factors.

In May 2023, she experienced a cardiopulmonary arrest and recovered after 30 minutes of resuscitation efforts. As a consequence, she developed acute kidney injury and

Received: 12/05/2025 **Accepted:** 08/07/2025 **Published Online:** 04/06/2025 **Published:** 11/07/2025

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required hemodialysis initiation. During hospitalization, she was not considered a candidate for a heart transplant and was discharged on a regular hemodialysis program. At her first palliative care appointment in June 2023, she presented a Palliative Performance Scale (PPS) score of 70%. Her children were her "motivation to fight" and, despite constant clarification, she was not fully aware of the seriousness of the situation or the importance of a restricted water intake plan. At this point, considering the patient's wishes and ability to tolerate treatment, hemodialysis was continued despite the establishment of a limitation on admission to the intensive care unit (ICU). Engagement with community social services was reinforced to clarify the available support for the children and to inform the planning of the patient's ongoing medical care. However, a clinical deterioration occurred. The inability to control the patient's severe ascites motivated a pigtail-catheter placement to avoid repeated paracentesis every time she attended hemodialysis sessions (during which up to 5 L were removed on some occasions). After multiple pigtail-catheter replacements, as depicted in Fig. 1, a Tenckhoff catheter was inserted in July 2024, given the ongoing difficulty in managing volume status through hemodialysis alone. Despite this, she presented to the emergency department multiple times in that year, primarily due to hypervolemia but also with two episodes of peritonitis and one case of hemodialysis catheter–related bacteremia.

In January 2025, she went to the emergency room one week after a fall, and a new bacteriemia motivated her hospitalization. Severe hypotension made hemodialysis particularly difficult. The intrahospital Palliative Care team was activated to review the adequacy of therapeutic efforts. A functional decline (PPS 50%) was evident over the previous month, along with a persistent sensation of fatigue and an increasing difficulty in tolerating dialysis treatments. At that stage, patient's interview was limited by a mild obnubilation state. Palliative Care and Nephrology teams agreed on the futility of keeping dialysis in this terminal and irreversible situation. Symptoms were addressed, the family (in the person of the eldest son) was involved and supported. Our patient peacefully passed away one day after.

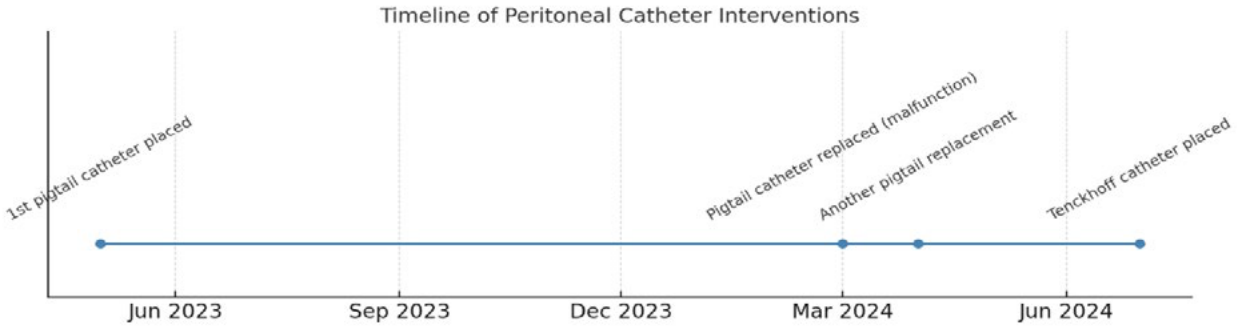

Figure 1. Timeline of peritoneal catheter interventions

DISCUSSION

According to Gómez-Rubí, life support therapies (LST) can be defined as procedures to prolong life artificially and "gain time" to resolve the situation with other therapeutic measures or spontaneous evolution.[8] These procedures can include cardiopulmonary resuscitation, mechanical ventilation, extrarenal purification systems, etc. Current medical training is mainly focused on scientific and technical procedures that can prolong life artificially for quite a long time. However, this pure technical approach often makes it difficult to take into account the patient's suffering and the fulfillment of his or her wishes. To practice responsible care, a strong commitment to bioethical principles is required.[5] In the form of limitation of admission to ICU, withholding the initiation of certain LST and withdrawal of futile measures,[5] ATE offers a way to dignity in dying, avoiding therapeutic obstinacy.

To accurately identify when a therapeutic intervention has reached its limit or is no longer effective, doctors must have an in-depth knowledge of the patient's clinical condition, not only in terms of age and comorbidities but also taking into account the reversibility and prognosis of the global clinical situation. In the dialysis population, there are several recognized factors that can predispose to hemodialysis withdrawal.[6,9] Acute medical complications requiring hospitalization[6] and worsening disability[9] are two well-established markers for hemodialysis withdrawal. If effectively considered, these illness trajectory markers can promote in-depth conversations, allowing the recognition of the patient's (and/or family's) values, expectations, and wishes related to EoLC. However, there are major barriers described to foregoing life-sustaining treatment.[10,11] Some of them are a clinical vision focused exclusively on prolonging survival, a lack of communication with patients and families to take into account their values and an appropriate end-of-life trajectory, fear of legal

consequences, personality traits and religious beliefs.[11] A palliative approach is necessary to deal with these situations of suffering in advanced diseases and collaboration with specific palliative care teams not only facilitates the patient's understanding of the situation but also supports truly multidisciplinary decision-making. This collaboration would allow the improvement in the communication between professionals and the implementation of protocols to help in withdrawing therapy, promoting an improvement in the feeling of good care provided and reducing emotional burden and burnout among professionals.[12] Also training to acquire communication skills in nephrology[13,14] and a more homogeneous distribution of palliative care teams through the country could lead to a better diffusion and implementation of Advance Directives in Portugal,[15] promoting patient's autonomy in EoLC aspects and contributing to a more responsible use of health care services.

In the end, dying with dignity is dying according to self-beliefs and values. Facing reality, the Nephrology community still has a long way to go to provide better end-of-life care to patients undergoing renal replacement therapy (RRT), particularly in Portugal with a total prevalence of patients on RRT of 2025 per million population.[7] Training palliative care competences among professionals[14] and developing guidelines and juridical clarification sessions can be crucial pillars in this process.

Ethical Disclosures

Conflicts of Interest: The authors have no conflicts of interest to declare.
Financing Support: This work has not received any contribution, grant or scholarship.
Confidentiality of Data: The authors declare that they have followed the protocols of their work center on the publication of patient data.
Patient Consent: Consent for publication was obtained.
Provenance and Peer Review: Not commissioned; externally peer-reviewed.

Contributorship Statement

AS: Literature review, manuscript design, first draft writing.
RSV and AAB: Manuscript design and critical review.
All authors approved the final version to be published.

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