

Expanded Criteria Donor Kidneys; A Viable Solution to Organ Shortages? A Single-Center Study of 440 Patients.

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BACKGROUND:

The ever-rising demand for renal transplantation has led to the broader use of Expanded Criteria Donor (ECD) kidneys. While ECD kidneys help in addressing the organ shortages, there remains worries regarding graft survival, delayed graft function (DGF) and long-term patient outcomes. An understanding of ECD kidneys is mandatory in optimizing their use while ensuring favorable patient outcomes.

OBJECTIVE:

To evaluate the feasibility of Expanded Criteria Donor (ECD) kidneys as a solution to organ shortages by assessing their impact on graft survival, delayed graft function (DGF), and long-term patient outcomes in renal transplantation.

METHODS:

A retrospective cohort study was conducted on 440 patients who underwent kidney transplantation at Bahria International Hospital from Jan, 2019 - Feb, 2025. Data on recipient demographics, donor characteristics, perioperative parameters, and post transplant outcomes (acute rejection, infections, and delayed graft function) were analyzed.

RESULTS:

Among the 440 donors, 3.4% (n=15) were > 60 years, including ABO-incompatible 0.2% (n=1). Furthermore, 0.2% (n=1) had diabetes and 0.9% (n=4) had hypertension. Structural abnormalities included 2.7% (n=12) of patients with renal stones, 0.5% (n=2) with a duplex system, and 9.8% (n=43) with complex anatomy. Additionally, 1.4% (n=6) had renal cysts < 1 cm. There were 2 deceased donors (0.5%), each donated two kidneys, among them 1 had stroke. Hence, a total of 19.6% of donors fell under Expanded Criteria Donors (ECD). Generally favorable outcomes were noted despite the use of ECD kidneys. Post-op graft functions were stable in these patients, with no rejection episodes or complications. There were only 2 mortalities.

CONCLUSION:

Expanded Criteria Donor kidneys can serve as a promising solution to address ever-increasing organ demand, without significantly compromising patient outcomes. With proper donor selection and perioperative management, ECD kidneys can be a valuable resource for expanding the donor pool and improving access to renal transplantation.

KEYWORDS:

Expanded criteria donors, kidney transplant, organ donation