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Editorial

Deceased Donor Kidney Transplantation in Pakistan: An Underutilized Resource

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Pakistan has more than 241 million people [1]. But there isn't a complete registry to show how many have chronic kidney disease (CKD). In 2024, only 28 centers shared their data, so the actual number of cases is probably higher [2]. Some studies estimate that about 24% to 25% of Pakistanis have CKD [3,4]. Based on these estimates, around 58-61 million Pakistanis have CKD. Treating CKD is very costly. Given the fragile economy, this is a major public health problem. Most people can't get hemodialysis or peritoneal dialysis. Kidney transplants usually help people with CKD to live longer. Sporadic live kidney transplantation does happen in Pakistan. On the contrary, organ donation after death doesn't happen much in Pakistan. As a result, deceased kidney transplantation is negligible in the country.

Pakistan puts just about 1% of its GDP into health care [5]. That means treatments like dialysis aren't fully covered, and patients usually have to pay the costs themselves. Most big hospitals only do dialysis for emergencies. Very few centers provide long-term maintenance dialysis. In 2024–2025, the average person made around $1,824, but a year of dialysis can cost $13,510 [6,7]. Around 61% of people live in rural areas, where dialysis is even harder to access [8]. Even when people can get it, it's rarely free.

Kidney transplants help people live longer and can really improve their quality of life [8,9]. The initial cost of transplant is high, but over time, it is lower than that of regular dialysis [10]. The first kidney transplant in Pakistan happened back in 1979, and since then, transplants from living donors have continued [11]. But it's still very rare to get a kidney from a deceased donor. Kidneys donated after brain death (DBD) or donation after cardiac death (DCD) provide better survival than dialysis [12]. DBD is common in many countries, and DCD is also used in several places [13]. Due to advancements in pharmacotherapy and perfusion techniques, donated organs from deceased donors last longer than before [14]. For example, in the United States, a kidney from a deceased donor now lasts about 12 years, compared to just 8 years in the 1990s [15].

Countries like the US and UK do a lot of deceased kidney transplants every year [16,17], but Muslim-majority countries do fewer. In 2023, Iran performed 1,373 deceased and 1,086 living-donor transplants [18]. In 2024, Saudi Arabia performed 203 deceased and 1,284 living-donor kidney transplants [19].

Pakistan's first deceased kidney transplant happened in 1998 at the Sind Institute of Urology and Transplantation [20]. In 2007, laws were passed to allow organ donation from brain-dead donors with consent, and a special authority started keeping an eye on transplant centers. These regulations were incorporated into the constitution in 2010 [20]. But there are still no laws about donating organs after cardiac death. Even though there's been legal support for over 15 years, hardly any kidneys from deceased donors are transplanted in Pakistan.

In 2024, there were 1,669 living-donor kidney transplants, but none from deceased donors [21]. Lack of knowledge of the public and cultural and religious worries about brain death are the main obstacles. Furthermore, the lack of organized donor programs, resources, and trained staff is another reason [22].

If the transplant community in Pakistan wants to do more deceased-donor kidney transplants, everyone needs to pitch in, including lawmakers, doctors, and community leaders. Teaching the public is key, and religious leaders can help by letting people know that organ donation is allowed in Islam [23]. Hospitals need better equipment and more staff training, and there should be clear systems to identify and alert potential donors.

A national transplant registry and better teamwork between hospitals would also help. The country has to decide if it wants the general public to opt in or opt out of organ donation. Every eligible patient should be enrolled in a transplant program at a local center. There should be fair rules for organ donation, and the laws should be updated to allow DCD donation.

In short, a significant number of Pakistanis have CKD. Treatment with hemodialysis and peritoneal dialysis is not universally available and is not free. Kidneys from deceased donors are almost never transplanted. Raising awareness, involving religious leaders, improving hospitals, and changing the laws to allow DCD could all help make deceased-donor programs more common. These changes would mean better care for people with CKD.

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