IMPACT OF PULSATIVE HYPOTHERMIC PERFUSION ON SUBOPTIMAL DONOR RENAL GRAFT: OUR INITIAL EXPERIENCE

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INTRODUCTION

Suboptimal kidneys show a higher rate of delayed function, increasing postoperative costs



Pulsatile hypothermic infusion can:

- Reduce the risk of delayed function and primary dysfunction.
- Increase the one-year survival of the kidney graft.
- Mitigate the effect of prolonged cold ischemia.

METHODS

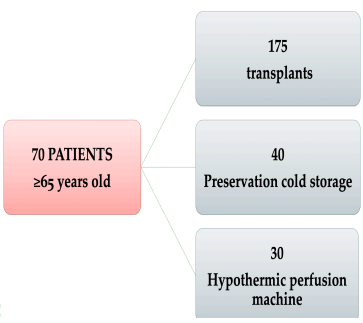
- ✧ Retrospective observational study during the years 2010-2012 where all the kidney transplants performed were included.
- ✧ To assess the complications that kidney transplant patients present with two types of preservation (static cold perfusion or pulsative hypothermia).
- ✧ Main study variables: hospital stay, hours of ischemia, need for dialysis and number of post-transplant sessions and pulsatile preservation device.
- ✧ Other variables: age and associated pathologies of the donor.

RESULTS

Bellvitge University Hospital:

- 40% of donors are between 50 and 70 years old and have some pathological history or cardiovascular risk factor.

Period March 2010-December 2012



Our experience:

pulsative perfusion vs static conservation

- Average reduction in hospital stay.
- Less need for post-transplant dialysis.
- Decrease in the number of dialysis sessions in grafts with acute tubular necrosis.



Kidney flow: 104,84ml/min (53–178). Final resistor: 0,23mmHg (0,1–0,45)

RESULTS

Variables analysis:

	Hypothermic perfusion machine	Preservation cold storage	Statistical significance
Age	73,27 years old	75,6 years old	P=0.11
DM	7	9	P=0.40
AVC	27	31	P=0.17
HTA	22	20	P=0.04



	Hypothermic perfusion machine	Preservation cold storage	Statistical significance
Hospitalization days	14.8 ±0.8	19.3±2.4	P=0.24
Hours of ischemia	19.3	20.13	P=0.39
Acute tubular necrosis	6	14	P=0.16
Sessions HD	1.07±0.2	2.58±0.8	P=0.13

CONCLUSIONS

The first data from our initial experience suggest that pulsatile renal preservation, used in donors with extended criteria, represents economic savings with amortization of the initial investment in the short term.

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