

# Relation between Ischemia and the graft function in decreased donor kidney transplant

Juan Flores Rodríguez\*, Cindy Salazar-López, María Padilla-Lucio, J Manuel C Martínez-Martínez, Guillermo Flores-Flores, Oscar A Gutiérrez-Ozaeta, Sigifredo Márquez-Hernández, Priscila Martínez-Romo, J Eduardo Vega-Domínguez

Juan Flores Rodríguez\*, Cindy Salazar-López, María Padilla-Lucio, J. Manuel C. Martínez-Martínez, Guillermo Flores-Flores, Oscar A. Gutiérrez-Ozaeta, Sigifredo Márquez-Hernández, Priscila Martínez-Romo, J. Eduardo Vega-Domínguez. Relation between Ischemia and the graft function in decreased donor kidney transplant. *J Kidney Treat Diagn* 2019;2(1):{pages}.

The cold ischemia time is the period between the start of perfusion with cold preservation fluids after suspending the circulation, until the

beginning of the first vascular anastomosis at implantation. Although cold ischemia has been widely used in the area of transplantation, there is no precise consensus between its relationships with the prognosis of renal transplantation.

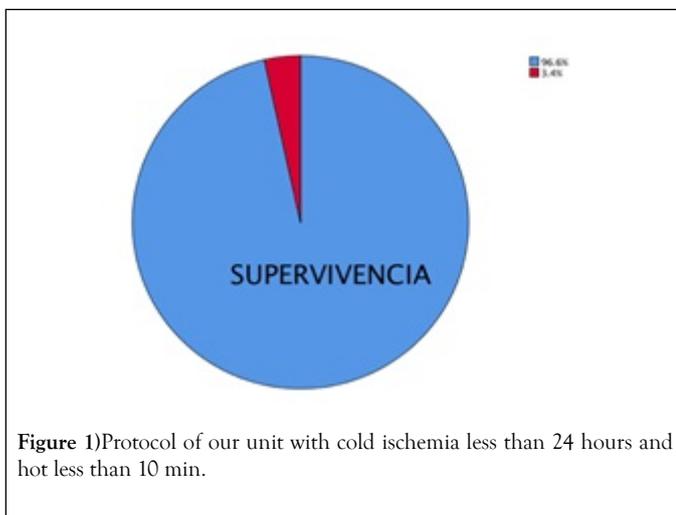
Among the risk factors for the development of delayed graft function are multiple factors, however, cold ischemia seems to be one of the most relevant. This suggests that the cold ischemia time should be reduced to decrease the risk of damage to the transplanted organ.

## ABOUT THE STUDY

A retrospective study is carried out in the 29-brain donor transplantation in the 2016-2017 period, trying to show if there is any relationship between the different types of ischemia, the characteristics of the different types of population, in the short and medium term. In the present study, 29 patients transplanted in a 2-year period of cadaveric donor were taken as a reference to determine the effect of cold ischemia on graft function [1-10].

29 donor transplanted patients, with a mean age of 39.5 years (55-10 years), being 65.5% male, with a prevalence of 62.1% for positive group O, 24.1% B positive and 13.8% A positive. No significance was detected in the correlation of creatinine levels and ischemia.

It was determined that the protocol of our unit with cold ischemia less than 24 hours and hot less than 10 min graft survival is 96.6% at 1 year as shown in **Figure 1**.



## CONCLUSION

In our population, no case exceeded 24 hours of cold ischemia that we consider should be the goal in every patient, this due to the high survival we present in the unit.

## REFERENCES

1. Debout A, Foucher Y, Trébern-Launay K, et al. Each additional hour of cold ischemia time significantly increases the risk of graft failure and mortality following renal transplantation. *Kidney Int.* 2015;87(2): 343-49.
2. Salahudeen A, Haider N, May W. Cold ischemia and the reduced long-term survival of cadaveric renal allografts. *Kidney Int.* 2004;65(2): 713-18.
3. Chatauret N. Ischemia-reperfusion: From cell biology to acute kidney injury. *Prog Urol.* 2014;24 (1):4-12.
4. Fonouni H, Jarahian P, Rad M, et al. Evaluating the effects of extended cold ischemia on interstitial metabolite in grafts in kidney transplantation using microdialysis. *Langenbecks Arch Surg.* 2013;398(1):87-97.
5. Xia Y, Friedmann P, Cortes C. Influence of Cold Ischemia Time in Combination with Donor Acute Kidney Injury on Kidney Transplantation Outcomes. *J Am Coll Surg.* 2015;221(2):532-38.
6. Eggener S, Clark M, Shikanov S, et al. Impact of warm versus cold ischemia on renal function following partial nephrectomy. *World J Urol.* 2015;33(3):351-57.
7. Ponticelli C. The impact of cold ischemia time on renal transplant outcome. *Kidney Int.* 2015;87(2):272-75.
8. Volpe A, Blute M, Ficarra V, et al. Renal Ischemia and Function After Partial Nephrectomy: A Collaborative Review of the Literature. *Eur Urol.* 2015;68(1):61-74.
9. Ponticelli C. Ischaemia-reperfusion injury: a major protagonist in kidney transplantation. *Nephrol Dial Transplant.* 2014;29(6):1134-40.
10. O'Callaghan J, Knight S, Morgan R. Preservation solutions for static cold storage of kidney allografts: A systematic review and meta-analysis. *Am J Transplant.* 2012;12(4):896-98.

Department of High Specialty Medical Unit IMSS 71, Torreon, Coahuila, Mexico

\*Correspondence: Juan Flores-Rodríguez, Department of High Specialty Medical Unit IMSS 71, Torreon, Coahuila, Mexico, E-mail: dr.juancarlosflores@hotmail.com

Received date: October 22, 2019; Accepted date: November 02, 2019; Published date: November 08, 2019



This open-access article is distributed under the terms of the Creative Commons Attribution Non-Commercial License (CC BY-NC) (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits reuse, distribution and reproduction of the article, provided that the original work is properly cited and the reuse is restricted to noncommercial purposes. For commercial reuse, contact [reprints@pulsus.com](mailto:reprints@pulsus.com)

