CYTOMEGALOVIRUS INFECTION AFTER ANTI-THYMOCYTE GLOBULIN IMMUNOSUPPRESSION IN KIDNEY TRANSPLANTATION

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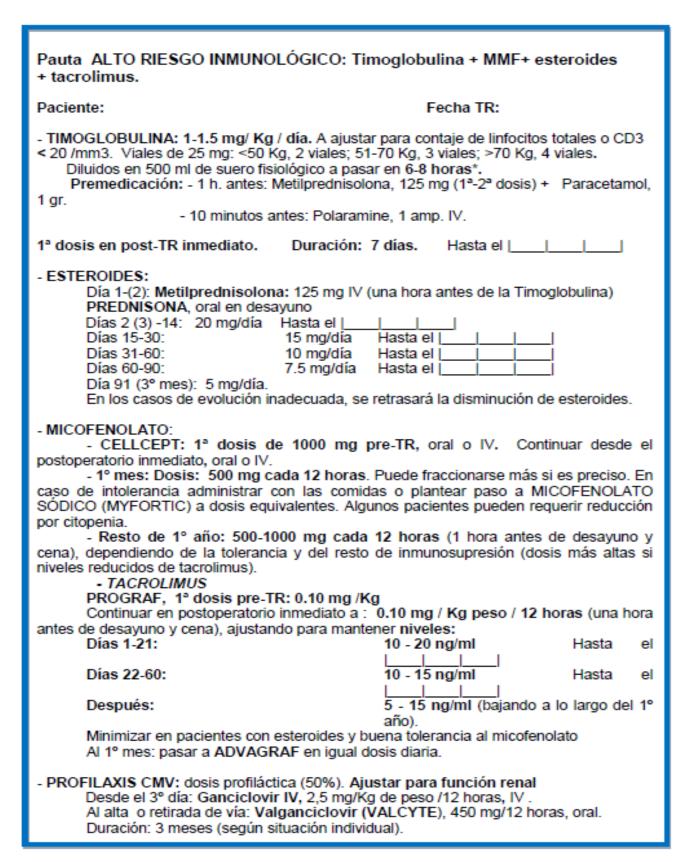
Background

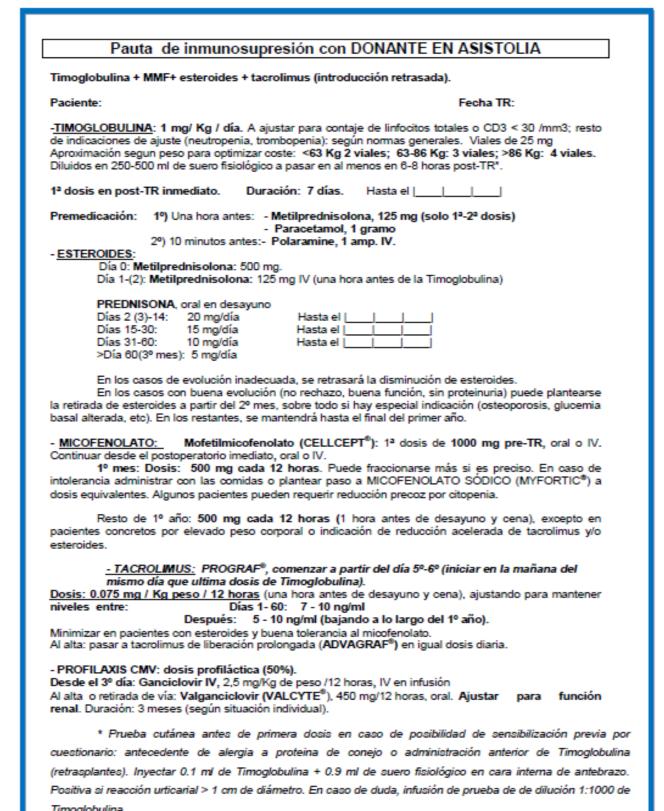
Immunosuppressive treatment for kidney transplantation is tailored to the clinical and immunological features of donors and recipients

Purpose

To describe the incidence of infection with cytomegalovirus (CMV) after immunosuppressant treatment with rabbit anti-thymocyte globulin (ATG) in kidney transplant patients, and the relationship with CMV serology and ATG dose

| CMV órgano | CMV donante | Origen del injerto | Riesgo | |
|------------|-------------|---------------------------|------------|--|
| + | - | Cadáver | Máximo | |
| + | - | Donante vivo | | |
| + | + | Cadáver o donante vivo | | |
| - | + | Cadáver o donante vivo | V / | |
| - | - | Cadáver o donante vivo | Mínimo | |





Material and methods

A retrospective descriptive study was carried out that included all kidney transplant patients who received ATG immunosuppressant induction treatment in 2012.

The following variables were collected:

- -Patient data: weight, sex
- -Transplant data: type of donor: living donor or dead (brain death or asystole)
- -Treatment data: dose and cumulative dose
- -CMV: donor and recipient serology, CMV viral load

All ATG protocols include ganciclovir or valganciclovir prophylaxis from the third day post-transplant for three months

Results

36 patients (25 men) were included. Regarding the type of donor: 19 were from brain death, 12 from asystole and 5 were from living donors.

12 of the 36 patients (33.33%) who received ATG developed CMV infection. 20 transplants were donor positive - recipient positive (D+/R+), and 4 of them were infected (20%). 10 patients were (D-/R+) and 3 of them were infected (30%). Only one patient was (D-/R-) and was not infected. The most important result was in the high risk group (D+/R-) because 4 patients were included and all of them developed primary infections. Another R+ patient was infected but we didn't know the donor serology.

No differences were found in the average dose received in infected patients (0.97 mg/kg/day) versus non-infected patients (1.01 mg/kg/day).

The dose of ganciclovir and valganciclovir were switched from prophylaxis to treatment until viral load control was achieved in all of them

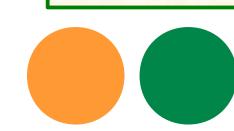
| Paciente | RECEPTOR | DONANTE | (mg/kg/día) | administra |
|----------|----------|----------|-------------|------------|
| 1 | Positivo | Negativo | 1,21 | 80,6 |
| 2 | Positivo | Positivo | 0,9 | 60 |
| 3 | Positivo | Positivo | 0,97 | 64,6 |
| 4 | Positivo | Positivo | 1,19 | 79,3 |
| 5 | Positivo | Positivo | 1,1 | 73,3 |
| 6 | Positivo | Positivo | 1,01 | 67,3 |
| 7 | Positivo | Positivo | 0,83 | 83 |
| 8 | Positivo | Negativo | 0,51 | 51 |
| 9 | Positivo | Negativo | 0,79 | 79 |
| 10 | Positivo | Positivo | 1,01 | 67,3 |
| 11 | Positivo | Negativo | 0,67 | 67 |
| 12 | Positivo | Positivo | 0,9 | 60 |
| 13 | Negativo | Positivo | 0,75 | 50 |
| 14 | Positivo | Negativo | 1,15 | 76 |
| 15 | Positivo | Positivo | 0,82 | 54,6 |
| 16 | Positivo | ¿? | 1,05 | 105 |
| 17 | Positivo | Negativo | 0,96 | 96 |
| 18 | Positivo | Positivo | 0,84 | 53 |
| 19 | Positivo | Negativo | 0,84 | 84 |
| 20 | Positivo | Negativo | 0,93 | 93 |
| 21 | Positivo | Positivo | 1,17 | 78 |
| 22 | Positivo | Positivo | 0,86 | 86 |
| 23 | Negativo | Positivo | 1,03 | 103 |
| 24 | Positivo | Positivo | 0,86 | 86 |
| 25 | Negativo | Positivo | 0,76 | 76 |
| 26 | Positivo | Positivo | 1,16 | 77,3 |
| 27 | Positivo | Positivo | 1,14 | 76 |
| 28 | Negativo | Positivo | 1,18 | 78,6 |
| 29 | Positivo | Positivo | 1,24 | 82,6 |
| 30 | Positivo | Positivo | 1,31 | 87,3 |
| 31 | Positivo | Positivo | 1,48 | 148 |
| 32 | Positivo | Positivo | 0,76 | 50,6 |
| 33 | Positivo | Positivo | 1,19 | 79,3 |
| 34 | Positivo | Negativo | 1,05 | 105 |
| 35 | Negativo | Negativo | 1,06 | 106 |
| 36 | Positivo | Negativo | 1,11 | 74 |

| SEROLOGÍA | PROBABILIDAD DE INFECCIÓN |
|---------------------|---------------------------|
| R+/D+ (Bajo riesgo) | 0,2 |
| R+/D- (Bajo riesgo) | 0,3 |
| R-/D- (Bajo riesgo) | 0 |
| R_/D+ (Alto riesgo) | 1 |

Conclusion

There was a high percentage of kidney transplant patients with ATG immunosuppression. Despite prophylaxis with ganciclovir or valganciclovir they had CMV infections, mainly in the D+/R- serology group, in which all of them developed CMV infection.

No relationship were found with CMV infection and ATG dose received



CP-172

