To evaluate the extinction of specific antibodies and the response to vaccination against measles in bone marrow transplant (BMT) recipients, 43 patients were studied: 23 patients vaccinated two years after transplantation (group 1 or late vaccination group) and 20 patients vaccinated one year after BMT (group 2 or early vaccination group).

The prevalence of measles IgG antibodies was evaluated by Enzyme Immunosorbet Assay (E.I.A). Antibody avidity, expressed by the mean avidity index, was determined by the urea method.

All patients had measles antibodies titers higher than 100 mUI/ml at the moment of transplant. A progressive decrease in antibody titer was observed during follow-up. Sixteen patients (69.6%) in group 1 and 4 (20.0%) in group 2 were susceptible to measles at the time of vaccination.

The overall response rate was 81.3% and statistically similar in both groups: 91.3% of the patients in group 1 (21/23) and 75.0% in group 2 (15/20). The mean antibody titers after vaccination were comparable in both groups, 885 mUI/ml in group 1 and 941 mUI/ml in group 2.

Among the 20 patients susceptible to measles at the time of vaccination, 6 presented low avidity antibodies on post vaccination sample, indicative of primary immune response. In the remaining 10 who were seronegative at vaccination, as well as in the 23 patients who were seropositive at the time of vaccine administration, medium and high avidity antibodies were detected, indicating a secondary immune response. No side effects to measles vaccine were reported.

Four patients, all from group 1, lost measles immunity one to two years after vaccination.

The results of the present study suggest persistence of donor memory B cells. Early vaccination against measles can be strategically recommended specially in some circumstances such as outbreaks, when the risk of measles infection is high in this population. Alternative schedules or additional doses of measles vaccine should be better investigated in this setting.