

SERUM ANTIBODY RESPONSE OF CORTISONE TREATED RABBITS TO SKIN ALLOGRAFTS: SERODIAGNOSIS OF ALLOGRAFT REJECTION?¹

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SUMMARY

Rabbits bearing skin allografts were treated with methyl-prednisolone to delay graft rejection. The recipients were studied serologically for histocompatibility antibodies by the antiglobulin consumption test, mixed agglutination, lymphoagglutination, and hemagglutination. No serum antibodies were detected in the drug treated host by the latter three methods. Data obtained from antiglobulin consumption show that the usual lag phase between rejection of a graft and the appearance of serum antibodies which is so characteristic of unmodified rejection is greatly reduced if not eliminated in rejection delayed by cortisone. This raises the possibility of a serologic method of diagnosing rejection.

INTRODUCTION

Following a skin allograft the host usually responds by the production of serum antibodies which react with histocompatibility antigens of the donor. These antibodies can be detected by a variety of methods. As a generalization, it may be said that detectable serum antibodies usually lag behind detectable rejection of skin allografts by days or weeks. In fact, this lag phase may be said to be a characteristic of the serum antibody response of the untreated host to an allograft of skin.

This characteristic is most evident if the antibodies are demonstrated by one of the methods which rely upon intact cells to present antigens to the serum for reaction. In these systems (hemagglutination, lympho- or leukoagglutination, cytotoxicity, and mixed agglutination) antibodies are frequently not detectable following the initial allograft, and some demonstrate antibodies only irregularly following a second allograft. However, this latter fact probably results from the sensitivity of the system, since, if the exquisitely sensitive mixed agglutination test is used, antibodies are found quite regularly following the second graft, at least in the rabbit. This characteristic lag phase

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