Summary & Conclusion

SUMMARY

Cyclosporin A (CyA) is a cyclic peptide and fungal metabolite. It is a potent immunosuppressive drug. It replaced azathioprine as the primary immunosuppressive agent in organ transplant. It has shown actual graft survival in cadaveric kidney recipient treated with it. Cyclosporine's effectiveness is based on its ability to inhibit the induction of interleukin 2 (IL-2) m RNA, this lead to decreased elaboration of IL-2 and other cytokines, critical factors in the cascade of events that lead to T cell proliferation.

Dexamethason (Dex) is a synthetic, glucocorticosteroid became evident early in the transplant. The mechanism of action based on their ability to block the elaboration of interleukin 1 (IL-1) by antigen activated macrophages, an early step in T cell activation leading to decreased T cell proliferation.

The study contains two groups:

Group (1): Thirty normal peripheral blood lymphocyte were stimulated with 1 ug/ml pHA and a concentration of CyA 250 ng/ml and Dex 10^{-6} M was added to the culture at (0 hour) separetly.

Group (2): Thirty normal peripheral blood lymphocyte half of them stimulated with mitomycin-c (act as stimulator cells) were cultured in MLC with the another unstimulated blood lymphocyte samples (act as responder cells). CyA was added in concentration 250 ng/ml and Dex 10^{-6} M at (0 hour) separetly.

Measurement of IL-2R expression was done by immunofluorescent technique to detect and compare the effect of both drugs in case of the pHA stimulated culture and in MLC.

We found that IL-2R expression in MLC (group 1) is more than in the pHA stimulated culture (group 1).

CyA produced more inhibition of the IL-2R than Dex in both MLC and the pHA stimulated culture (group 1 and 2). The inhibition of IL-2R expression with CyA was more in MLC (group 2) than the pHA stimulated culture (group 1) although it is not statistically significant.

So CyA has a potent immunosuppressive effect in both pHA stimulated culture and in MCL than Dex.