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EFFECTS OF $CD8^+CD28^-$ T SUPPRESSOR LYMPHOCYTE (Ts) ON B- AND T-LYMPHOCYTE FUNCTION IN SYSTEMIC LUPUS ERYTHEMATOSUS (SLE). TKK Tong, CS Lau. Department of Medicine, The University of Hong Kong, Hong Kong, China.

Objective: The imminologic aberrations seen in SLE may result from changes in active suppression of the immune system. Ts has previously been suggested to be defective in patients with SLE. However, previous reports have been controversial as only CD8+ T cells were studied in most cases. In this study, we investigated the suppressive activity of freshly isolated, highly purified $CD8^+CD28^-$ Ts from patients with SLE on normal and SLE responder B- and T-lymphocytes. Results were compared with those obtained from controls.
Methods: Peripheral CD8 cells from control subjects and patients with SLE were isolated by negative selection with anti-CD4, CD14 and CD19 Dynabeads. $CD8^+CD28^-$ cells were purified by removing $CD28^+$ subset of cells by anti-CD28 monoclonal antibody labelling followed by the addition of anti-rat IgG Dynabeads. Purified $CD8^+CD28^-$ Ts were then cultured alone, with ConA, TGFβ or histamine for 2 days. Culture supernatants were then added to responder peripheral blood mononuclear cells (PBMC) from healthy subjects or another patient with SLE for detection of suppressive activity on B- and T-lymphocytes. For B-cell activity, PBMC were activated with PWM and the production of IgG was measured after 7 days. For T-cell activity, PBMC were stimulated with PHA and cell proliferation was measured by thymidine incorporation after 3 days.
Results: Ts from SLE patients and controls had no inhibitory effects on T-cell proliferation. Supernatants of $CD8^+CD28^-$ Ts which were cultured alone or with TGFβ or histamine did not influence IgG production of responder B-cells. Supernatants of control and SLE $CD8^+CD28^-$ Ts which were ConA stimulated significantly decreased the IgG production of healthy subject derived responder B-cells by 63.4 (±35.6)% and 45.2 (±39.9)% respectively (controls vs SLE, p=0.2). However, if the responder B-cells were derived from patients with SLE, no IgG inhibitory effects were demonstrated.
Conclusion: ConA was a critical stimulant of $CD8^+CD28^-$ Ts. $CD8^+CD28^-$ Ts had no suppressive activities on T-cell proliferation. Suppressive effects of $CD8^+CD28^-$ Ts from patients with SLE on normal B-cells were intact. However, the same Ts failed to suppress the IgG production by SLE B-cells. Studies on cytokine production by $CD8^+CD28^-$ Ts, $CD8^+CD28^-$ Ts-B interaction and B cell activity in SLE are underway.

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INTERMITTENT MONTHLY INTRAVENOUS INFUSION OF ILOPROST MAY IMPROVE THE PROGNOSIS OF SYSTEMIC LUPUS ERYTHEMATOSUS (SLE) ASSOCIATED SEVERE PULMONARY HYPERTENSION (PHT). MY Mok, HF Tse and CS Lau. Department of Medicine, The University of Hong Kong, Hong Kong, China.

Objective: The prognosis of PHT in SLE is grave. The case of a patient with SLE who developed severe PHT treated with intermittent intravenous iloprost infusion with prolonged survival over 5 years is reported.
Report: A 27 years-old lady was diagnosed SLE in Feb 1993. She had Raynaud's phenomenon, polyarthralgia, generalised lymphadenopathy and shortness of breath. Her exercise tolerance was equivalent to that of NYHA Class III. CXR showed mild cardiomegaly and echocardiogram showed a dilated right ventricle. Cardiac catheterization confirmed PHT with a systolic pulmonary arterial pressure (sPAP) of 66 mmHg. She had normal ventilation/perfusion scan, absence of interstitial lung involvement, negative lupus anticoagulant but positive IgG anti-cardiolipin antibody. Treatment with oral prednisolone (1mg/kg/day) was started but this was complicated by steroid induced psychosis. She defaulted follow up but turned up again in December 1994 with worsened sPAP (80 mmHg). She was given oral cyclophosphamide 1 mg/kg/day for 6 months followed by a maintenance dose of azathioprine 1 mg/kg/day, together with aspirin, oral calcium channel blocker, digoxin and home continuous oxygen therapy without avail. Intravenous iloprost infusion was tried. Cardiac catheterization showed a decrement of 20% in PAP and pulmonary vascular resistance during an intravenous infusion of iloprost up to 2 ng/kg/min, suggesting a reversible element. She was started on an intermittent monthly regimen of iloprost infusion 2 ng/kg/min 8 hours a day for 2 days each month. There was no compromise of her cardiac index and no major adverse reactions. Her sPAP dropped to 65 mmHg and 60 mmHg at 9 months and 2.5 years after the commencement of intermittent iloprost therapy respectively. She has now completed over 4 years therapy and is currently asymptomatic with an exercise tolerance equivalent to that of NYHA Class I and sPAP of 50 mmHg.
Conclusion: Intermittent iloprost infusion may be useful in prolonging the survival of SLE patients with severe PHT. The treatment is well tolerated with no major adverse effects. A baseline right cardiac catheterization may be useful in assessing reversible elements and predicting treatment response.