with HTLV-I to onset of ATL is very long in both sexes. If the latency period is equal to the mean age at onset of ATL, the mean life expectancy in females of 80.5 years in Japan in 1985 [5] is much smaller than the age (30 years or more) at which a rising number of female HTLV-I carriers, due to seroconversion via sexual transmission, occurs plus the mean age at onset (55.8 years) [4] of ATL among females. No bimodal age distribution for onset of ATL among females was reported. Therefore, the number of ATL cases among female HTLV-I carriers sexually infected from male partners is small, if any.

The risk of ATL among HTLV-I carriers horizontally infected via transfusion, irrespective of gender, is not known. A blood bank system has only been in operation in Japan for about 40 years. If the latency period is unrelated to infection route, onset of ATL among virus carriers infected via transfusion would not have occurred.

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Toxic Epidermal Necrolysis during Chlorambucil Therapy in Chronic Lymphocytic Leukaemia

C. Barone, A. Cassano and A. Astone

WE REPORT a 57-year-old female with chronic lymphocytic leukaemia who had toxic epidermal necrolysis (TEN) after chlorambucil alone (0.1 mg/kg per day). During initial treatment a confluent maculopapular erythema of trunk, legs, feet and mucous membranes erupted followed by large flaccid blisters and fever. Despite administration of 6-methylprednisolone the rash became widespread and exfoliation occurred. After 18 days of chlorambucil therapy, white blood cell (WBC) count was 21 $\times$ 10^9/l and gram-negative sepsis had developed; therefore chlorambucil was discontinued. Erythromycin and gentamicin were started and the eruption and sepsis resolved after 8 days. The patient was discharged without further treatment (WBC 5 $\times$ 10^9/l).

4 months later, the patient's WBC rose to 30 $\times$ 10^9/l and chlorambucil alone was restarted. No other drugs (particularly allopurinol) were used to minimise the risk of cutaneous reaction. A few hours after chlorambucil (2.5 mg) was taken, the patient had a diffuse erythema of the skin with eruption of flaccid blisters on buttocks and thighs. During the following days large sheets of necrotic superficial epidermis detached from the skin. A cutaneous biopsy showed coagulative necrosis of keratinocytes, dermoepidermal separation and perivascular lymphocytic infiltration. Marked sensitivity to chlorambucil caused TEN. Prompt therapy with prednisone resolved the toxic reaction.

2 months after this episode, the patient had a skin-patch test. Chlorambucil in vaseline (5 and 10%) was applied on the intact skin of the forearm (Dermo-test Diagent). A papular vesicular eruption occurred after 48 h with a maximum at 72 h. Patch tests performed with European Standard Series were negative. 10 volunteers, 5 previously treated with chlorambucil, had the same test without developing a reaction.

Chlorambucil has been associated with a cutaneous reaction in only a few cases [1–4], and our report of TEN is rare. The pathogenesis of TEN is unclear: besides immunological causes, cytochemical and photosensitivity mechanisms seem to play a role.

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Neoadjuvant Low-dose Chemotherapy with Insulin in Breast Carcinomas

Steven G. Ayre, Donato Perez Garcia y Bellon and Donato Perez Garcia Jr

WE HAVE developed a neoadjuvant chemohormonal therapy for breast carcinomas without surgery or radiotherapy. Cyclophosphamide, methotrexate and 5-fluorouracil are administered, with insulin as a biological response modifier to potentiate anticancer drug effects [1]. This regimen affords maximum breast conservation and minimum patient discomfort.

Breast malignancies are histologically verified by fine needle biopsy. Insulin/chemotherapy cycles are repeated twice a week for 3 weeks, and then weekly for another 3–6 weeks depending on clinical findings. Fasting subjects receive insulin (0.3 U/kg) and, at onset of hypoglycaemia, cyclophosphamide 8 mg/m^2,

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