Anticardiolipin Antibodies in Chronic Hepatitis C: Implication of Hepatitis C Virus as the Cause of the Antiphospholipid Syndrome

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Antiphospholipid antibodies are a type of autoantibodies that have been implicated in the occurrence of thrombocytopenia and thrombotic events and have been described in autoimmune disorders and diverse viral diseases. In this study anticardiolipin antibodies (immunoglobulin G [IgG] isotype) were determined in serum from 100 patients with chronic hepatitis C and 52 healthy controls. In addition, hepatitis C virus (HCV) markerts (anti-HCV and CV RNA) were investigated in 73 patients with thrombotic disorders and no clinical evidence of liver disease; of these patients 37 cases tested negatively for anticardiolipin antibodies and 36 positively. Anticardiolipin test was positive more frequently (22 %) in the group of patients with chronic hepatitis C than in healthy controls (1.9 %; P <.001). Using conditional logistic-regressions analysis we found that in hepatitis C patients the presence of thrombocytopenia, portal hypertension and the existence of prior thrombotic episodes were significantly related to positivity for anticardiolipin antibodies (P <.05 in all cases). In patients with no evidence of liver disease and a history of thrombotic events, hepatitis C markers were absent in all cases who tested negatively for anticardiolipin antibodies (n = 37), but were present in 16.7 % of those positive for anticardiolipin (n = 36) (P = .01). In conclusion, anticardiolipin antibodies are frequently found in patients with chronic hepatitis C and in these patients they may be implicated in the occurrence of thrombosis and in the development of thrombocytopenia. Occult HCV infection is present in a significant proportion of patients with thrombotic disorders and positive for anticardiolipin (the antiphospholipid syndrome).

Utilidad clínica de un nuevo inmunoensayo para determinar la concentración plasmática de los complejos plasmina-antiplasmina

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A monoclonal antibody (Mo Ab) based ELISA assay to measure plasma concentrations of plasmin-antiplasmin (PAP) complexes has been developed. After purification of PAP from fresh plasma we obtained a pool of Mo Abs against complexes by immunizing BALB/c mice with the purified material. Two of them, CPL12 and CPL15, were selected for the ELISA. This assay was applied to plasma samples from healthy donors and patients under different clinical conditions where

the fibrinolytic system is activated, such as sepsis, cirrhosis and thrombolytic therapy for AMI. The ELISA developed is specific for PAP complexes and can accurately measure PAP values above 75 ng/ml. Variation coefficients were 3.5 and 10.6 for intra and inter series respectively. A mean value of 573 ± 131 ng/ml was calculated for the healthy donors group. Significantly higher concentrations were found in all patients studied ($p < 0,0001$), specially in those undergoing thrombolytic therapy.

In clonclusion, we have developed a new ELISA that specifically measures plasma PAP concentrations which is suitable to monitor the *in vivo* activation of the fibrinolytic system.

Fruit sensitization in patients with allergy to latex

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In the last years, latex has frequently been found to be involved in immediate hypersensitivity reactions. The first case mentioned with recurrent urticaria and laryngoedema was reported by Stern (1) in 1927. Since then, latex has also been implicated in generalized urticaria, rhinoconjunctivitis, asthma and anaphylaxis. Associated sensitization to several fruits is frequently seen in latex-allergic patients with the symptoms described above. This study was performed in seven patients (six females and one male) with hypersensitivity to latex and concomitant fruit sensitization. Six of them were healthcare personnel. The age of the patients ranged from 25 to 39 years, with a mean of 30 years. Prick tests and intracutaneous tests with latex (10 % w/v in PBS), banana, chestnut, avocado, kiwi and melon were carried out. A specific histamine release test (HRT) was performed according to the fluorometric assay. Antigen-specific IgE was also perfomed. Latex CAP inhibition with banana and SDS-PAGE immunoblotting were carried out in one patient. Although in latex-allergic patients multiple sensitization to fruits may be observed, banana and avocado are those most frequently involved, followed by chestnut and melon. This is likely to be due to the presence of common antigens in these fruits and latex, as demonstrated in our study only for banana and avocado. We consider that further investigation is needed on the possible sensitization to latex in sanitary personnel reporting symptoms after fruit ingestion.