

Comparative Study of Propensity for Amyloidogenesis in Male and Female Mice

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Abstract : Reactive amyloidosis is a condition that complicates a long list of chronic inflammation, chronic infectious, malignant, and hereditary disorders. In the present study the propensity for amyloidogenesis in male and female rats on spatio-temporal pattern was evaluated. For this purpose a total of 40 male and female Swiss mice, obtained from Pasteur Institute Tehran, after being weighted were randomly divided into 4 groups including 2 treatment groups [10 male (Group A1) and 10 female (Group B1) each], and 2 control groups [10 male (Group A2) and 10 female (Group B2) each]. At the end of 3rd, 5th and 7th weeks of experiment 3 mice were randomly selected and euthanised. Spleen samples of each animal were obtained and preserved in 10% neutral buffer formalin. Sample were then processed through different stages of dehydration, clearing and impregnation and finally embedded in paraffin blocks. Sections of 5µm thickness then cut and stained by alkaline Congo red techniques. The data obtained from polarized microscopic quantitative analysis did show significant differences between groups A1 and B1. A preferential expression of reactive amyloidosis is concluded in male, indicating sex differences in amyloidosis.

Keywords : amyloidosis, amyloidogenesis, mice, gender

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