البحث السابع بحث مشترك منشور (غير مستبط من رساله)

تأثير الجمع بين العلاج المناعي بالإنترفيرون الفا جنبًا إلى جنب مع البرازيكوانتيل فى التعبير الجيني لعامل VEGF ، مما يتسبب في تراجع التليف الكبدي في العدوى التجريبية للبلهارسيا المنسونية المعوية

Interferon-A immunotherapy, combined with praziquantel downregulates VEGF gene expression, causing regression of hepatic fibrosis in chronic *Schistosoma mansoni* experimental infection.

المجلة:

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Abstract:

Immune cells related to T helper 2 cells, supported by VEGF are accused of being the cause of the excessive fibrous granulomatous hepatic lesions in chronic schistosomiasis, resulting in mortality and morbidity within the infected cases. In this work, intraperitoneal injection of IFN-α was used, combined with praziquantel as an antagonist to the Th2 mechanism, to investigate its immunotherapeutic effect on chronic murine schistosomiasis, in comparison with a group treated with the usual dose of praziquantel. Lower values concerning granuloma number and size were attained in the IFN- α treated groups combined with praziquantel than in the non-treated group as well as the group treated with praziquantel only (P-value<0.01). Mainly cellular granulomas were seen in the IFN- α treated group, while they were mainly fibrous in the infected non-treated control group and fibro-cellular in group treated with praziquantel only. Concerning molecular testing, in the infected non-treated control group, the mean number of VEGF mRNA was 3.73 ±0.67. Samples from the IFN-α + Praziquantel treated group showed the lowest level of VEGF mRNA (0.88±0.32), compared to the control infected group (P value<0.01). The decrease in VEGF mRNA expression level was less prominent in the Praziquantel treated group (1.65 ± 0.73), however statistically significant as

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compared to control. In conclusion, this study revealed immense anti-fibrotic effect for IFN-α with significant minimization of the severity of *S. mansoni* chronic infection, thus avoiding the morbid complications of end-stage hepatic disease. Its use as adjunct immunotherapy to the known specific anti-schistosomal agents is very promising, particularly in high-risk individuals, who developed exaggerated Th2 immune response, next to the chronic infection and can be diagnosed by measuring the level of VEGF as an indicator for fibrogenesis.

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