

Production of NO and IL-10 by macrophages from adult mice offspring of schistosomotic mothers in postnatal infection

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Maternal infections by *Schistosoma mansoni* modulate adult offspring immunity in postnatal infections. Here, was evaluated separately the effect of breastfeeding and pregnancy in this phenomenon by the expression of macrophages producing NO and IL-10 and production of NO and IL-5 in adult offspring from schistosomotic mothers when subjected to post-natal infection. *Swiss webster* females were infected with *S. mansoni* (20 cercariae) and mated. After birth, adoptive breastfeeding was held in which offspring born from infected mothers suckled by non-infected mothers (BIM) and offspring from non-infected mothers were suckled by infected mothers (SIM). Another group of animals born from schistosomotic mothers remained suckled by their own mothers (BSIM). To control group, was used animals born and breastfed in uninfected mothers. Male offsprings were infected (80 cercariae) and 60 days post-infection, splenocytes were cultured with SWAP (12,5 µg/ml) or ConA (5 µg/ml). After 24 hours, cells were used for immunophenotyping with monoclonal antibodies labeled to fluorochromes for CD-14+IL-10+ and CD16/CD32+/NOS2+. After 72h, supernatants were collected for determination of IL-5 and NO by ELISA. Compared to control, the BIM group showed increased frequency of CD16/CD32+/NOS2+, increased production of NO and IL-5. The SIM group compared control, had higher frequency of CD16/CD32+/NOS2+ and less IL-5 and NO levels. The BSIM group showed lower production of NO. There was no difference in the levels of CD14+/IL-10+ cells. In conclusion, pregnancy and breastfeeding, separately, led to increased CD16/CD32+/NOS2+ cells frequency, and only pregnancy led to increased levels of IL-5 and NO.

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