

Expression of angiogenic and inflammation markers in murine schistosomiasis mansoni

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AIM

To study angiogenesis in the livers of mice infected with *S. mansoni*.

BACKGROUND

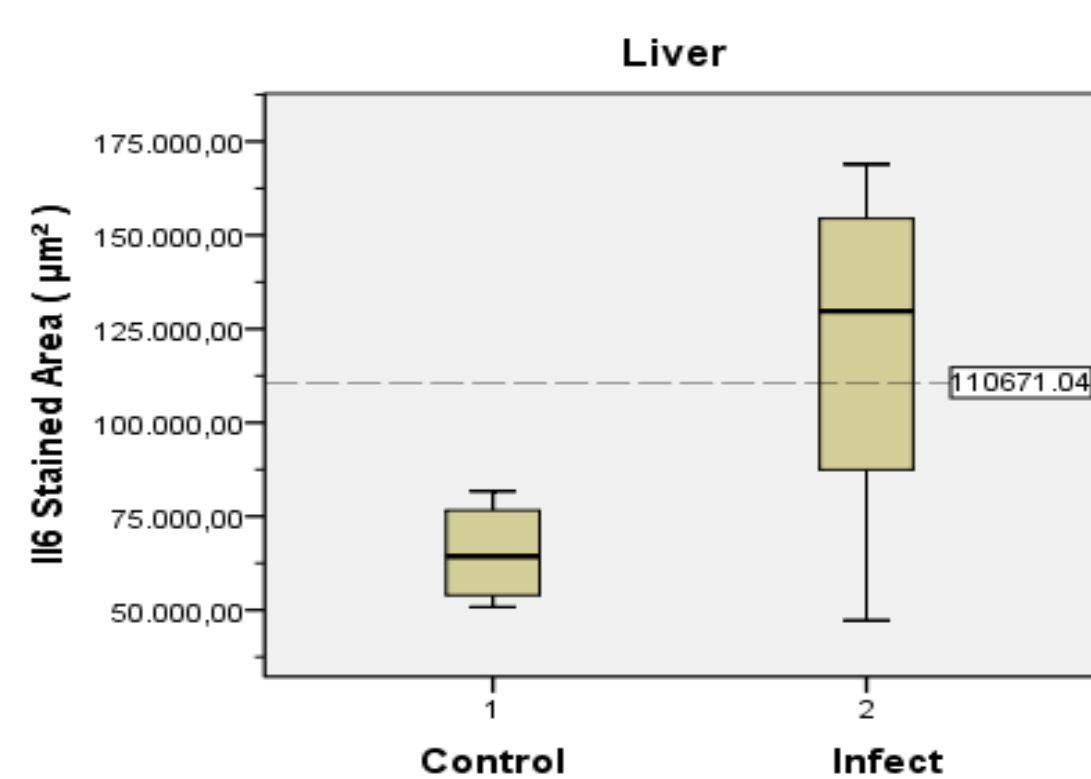
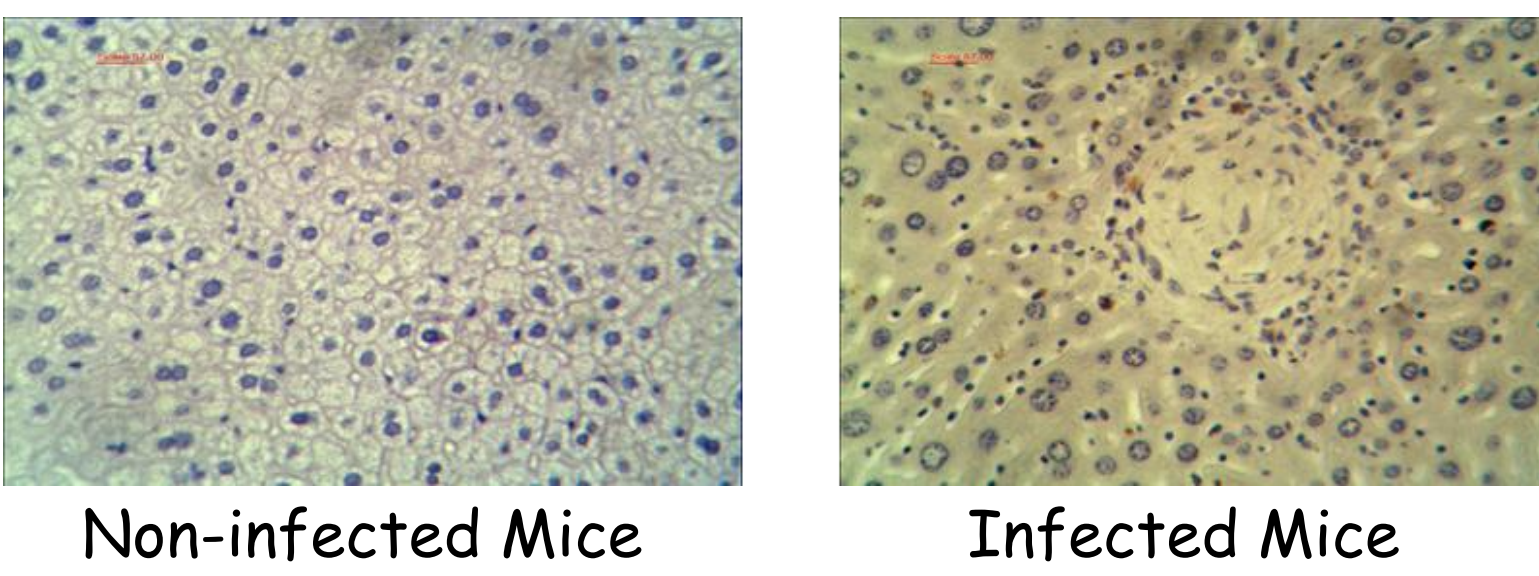
- Schistosomiasis is a neglected tropical disease, endemic in 76 countries, that afflicts more than 240 million people. Symmers' portal fibrosis (also called periportal fibrosis) is a characteristic hepatic disease described in schistosomiasis.
- Although estimates are not available, Schistosomiasis must still be considered to be the most frequent cause of liver fibrosis worldwide.
- Angiogenesis, the formation of new blood vessels from pre-existing ones, is recognized as a key event in a basic change occurring during repair by granulation tissue. This process seems to precede fibrosis formation in most types of chronic liver disease (Fig. 2).

METHODOLOGICAL STRATEGY

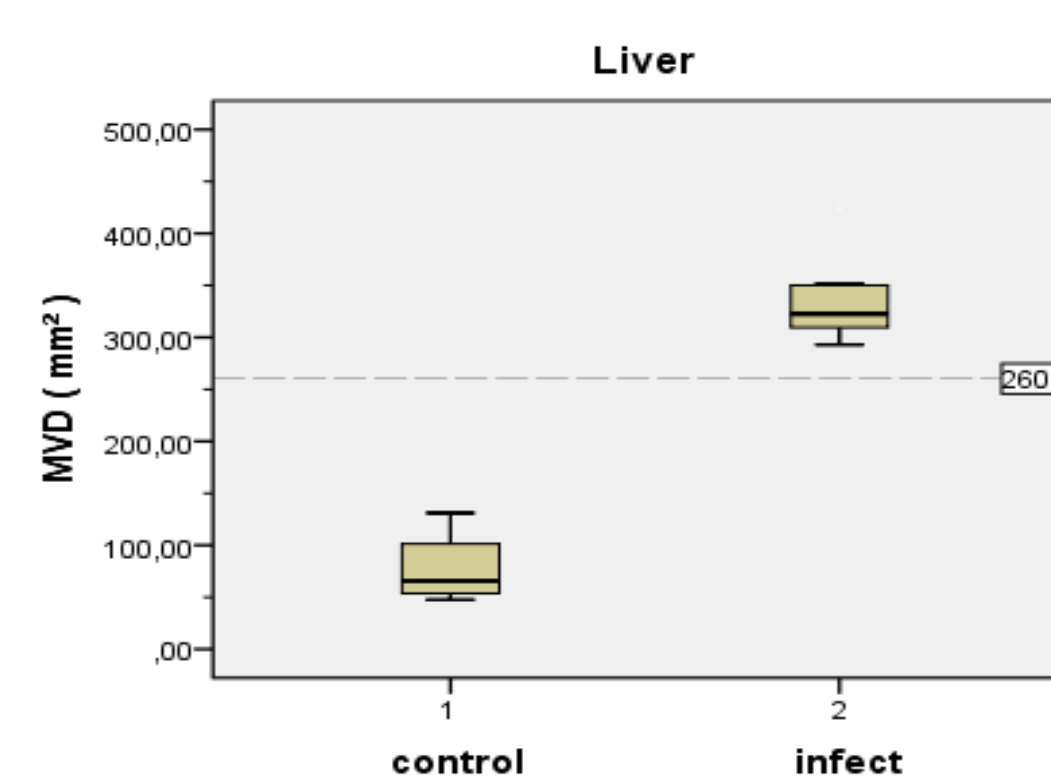
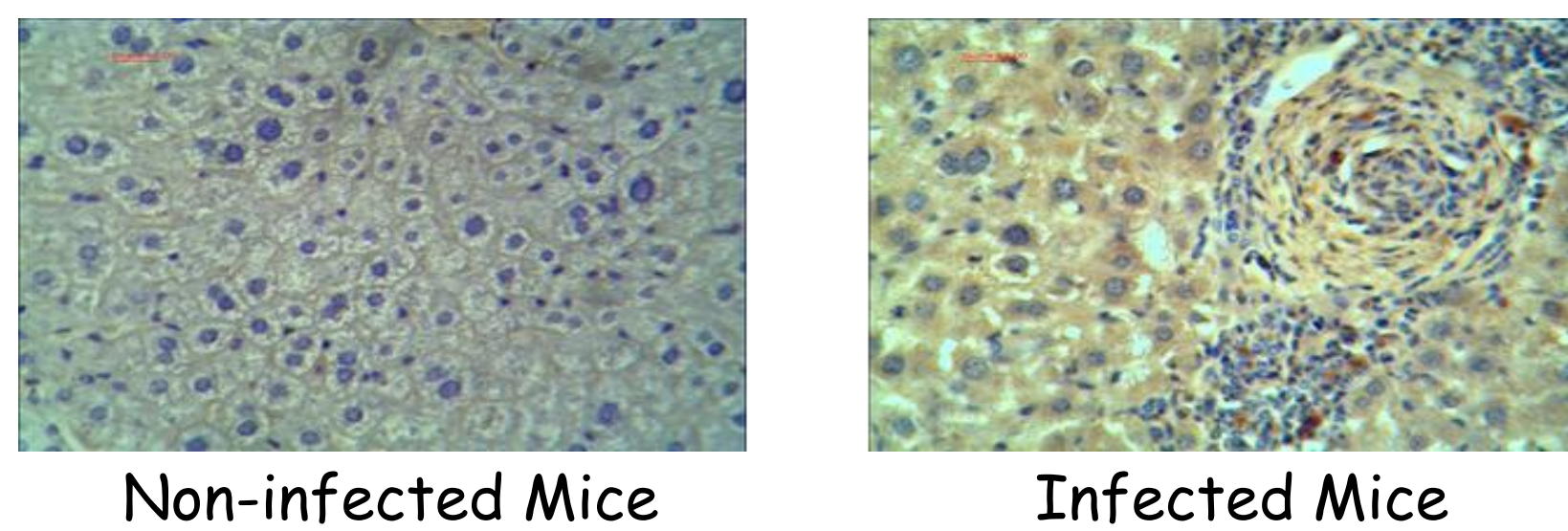
By immunohistochemical staining using IL-6 as inflammation marker, Von Willebrand (CD31) as endothelial marker, Microvessel Density (MVD) as angiogenesis marker and LYVE-1 as lymphangiogenesis marker in the livers of normal control mice and *S. mansoni* infected mice.

RESULTS

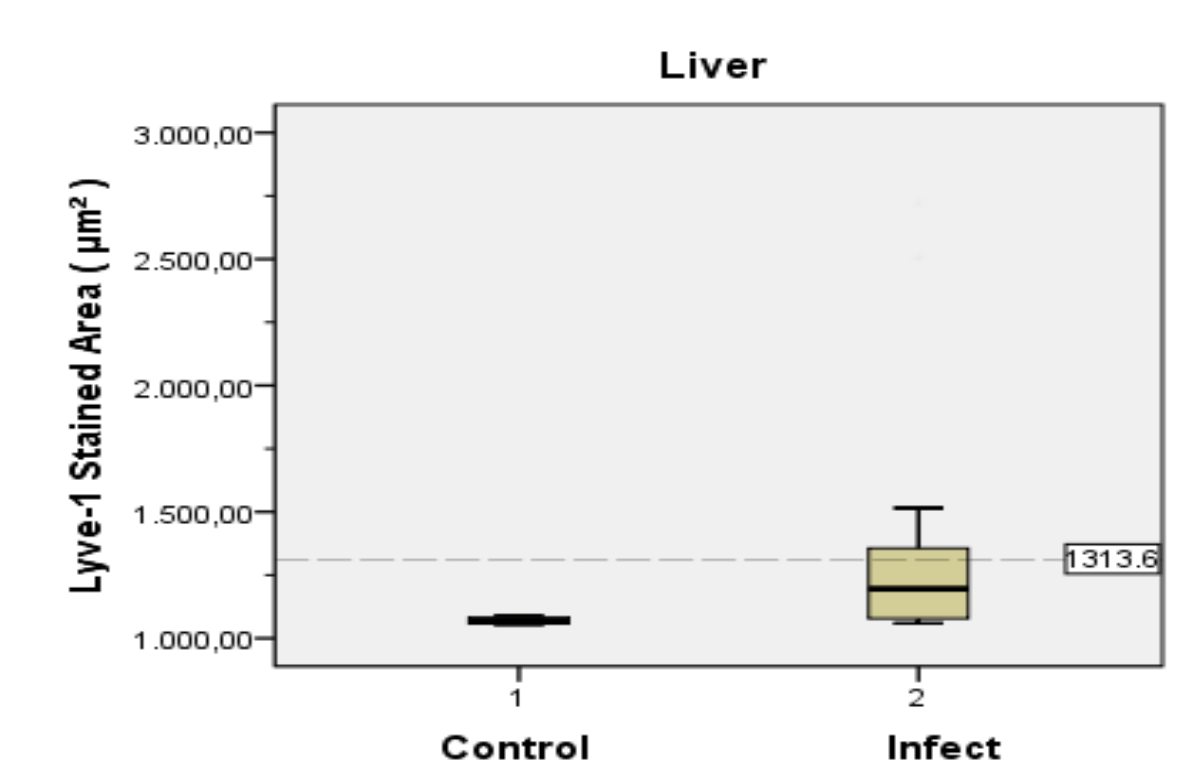
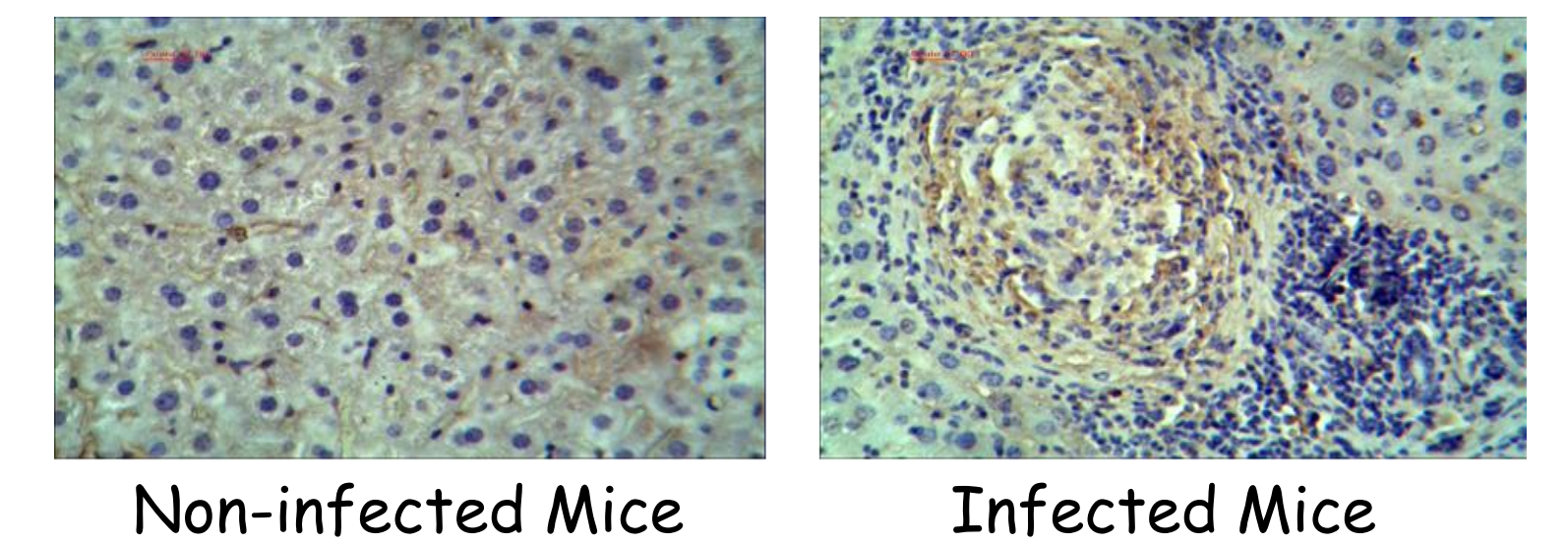
S. mansoni infection increases inflammation (IL-6) in liver



S. mansoni infection increases MVD in liver



S. mansoni infection increases expression LYVE-1



CONCLUSIONS

- *S. mansoni* infection increases inflammation, angiogenesis and lymphangiogenesis in the liver.
- Thus, blocking blocking IL-6 and /or lymph/angiogenesis may represent the appropriate therapeutic target for the treatment of schistosomal liver fibrosis.

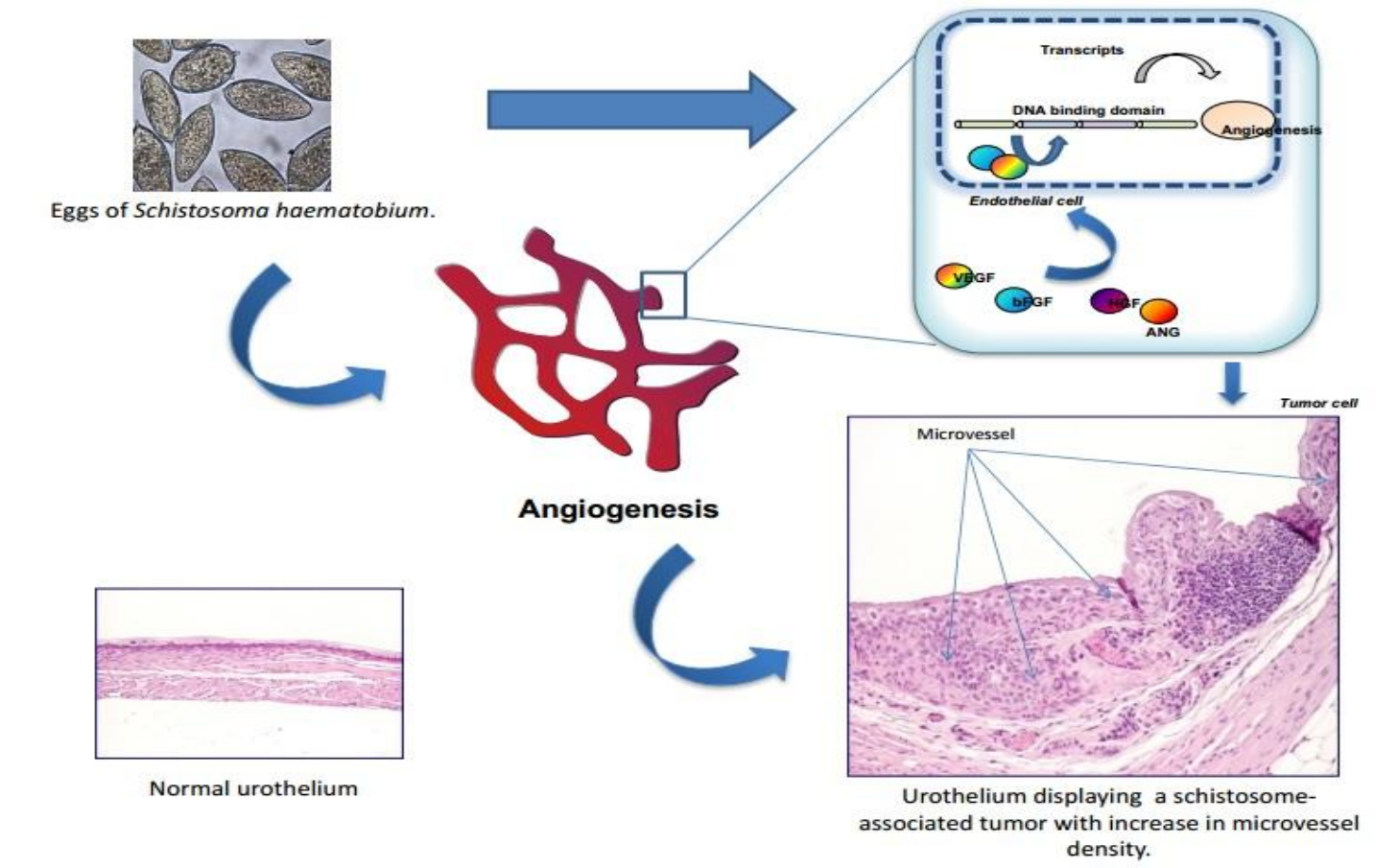


Fig. 1: Angiogenesis in *S. haematobium*-associated bladder cancer.

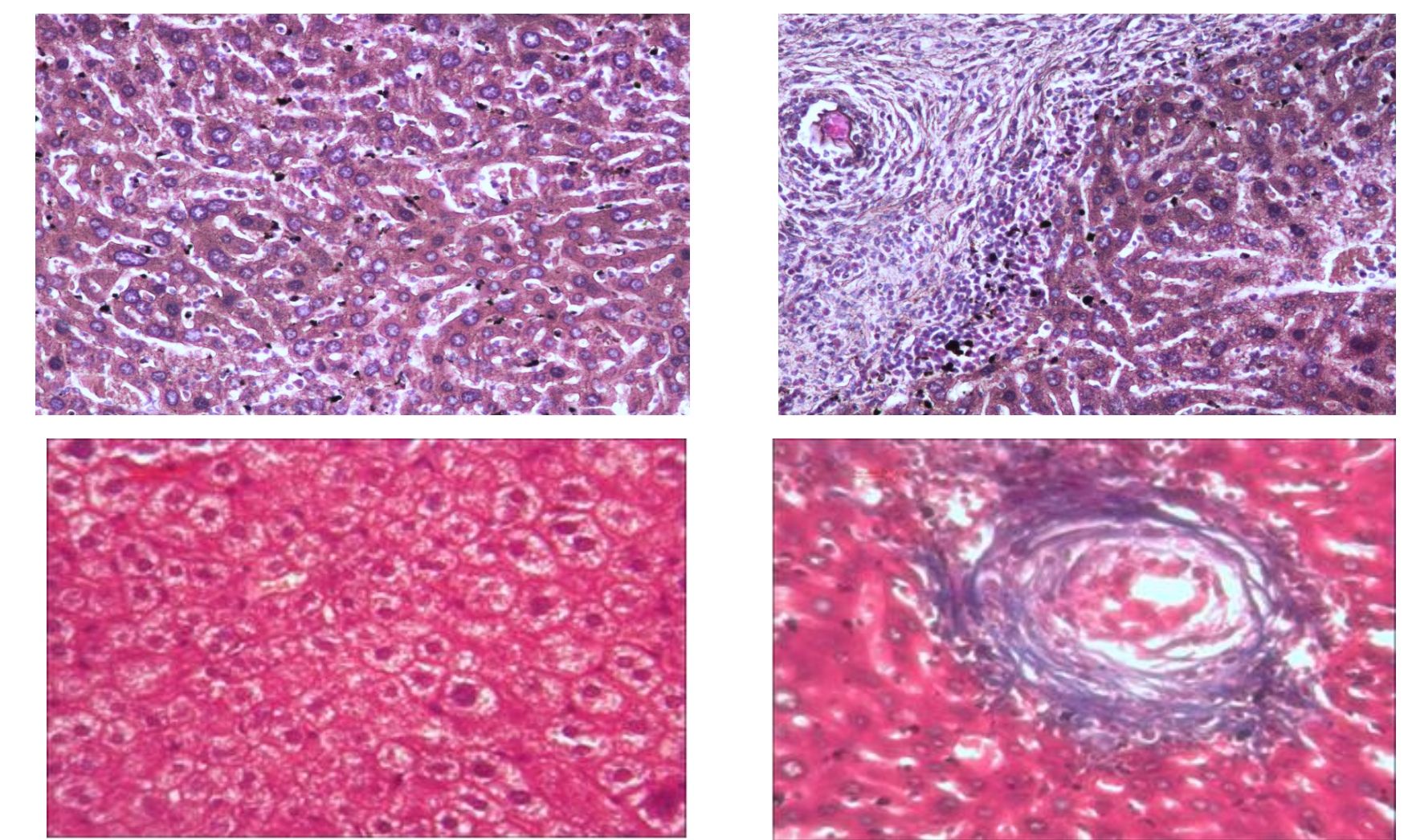


Fig. 2: Liver pathology and fibrosis in murine schistosomiasis mansoni. (Left non-infected and Right Infected mice)