Myalgia, Fever, Abnormal Muscle Enzymes and Blue Urine in a Farmworker from Thailand

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Key words: Trichinella spiralis, myositis, edema

A 37 year old farmworker from Thailand was admitted to the department of medicine with a 2 week history of fever, myalgia and leg edema. In Thailand, a year before his admission and later in Israel, he supplemented his diet with wild animals.

On physical examination the patient was febrile with hepatomegaly and significant peripheral edema. Blood analysis revealed elevated levels of liver and muscle enzymes (aspartate aminotransferase 267 U/ml, alanine aminotransferase 548 U/ml, lactate dehydrogenase 3,356 U/ml; creatine phosphokinase 5,692 U/ml and aldolase 134 U/ml). Unexpectedly, his urine color was navy blue on repeated tests. He later admitted to having taken a home-made antiseptic remedy based on methylene blue.

A skeletal muscle biopsy demonstrated an infiltration composed of plasma cells, lymphocytes, granulocytes and eosinophils. There were also many larvae inside the muscle cells, with structures typical for Trichinella spiralis [Figure]. Treatment with albendazole resulted in amelioration of the myalgia, edema and fever, and normalization of liver and muscle enzymes.

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Capsule

Natural killer cells and viruses

Natural killer (NK) cells provide a vital link between innate and adaptive immunity and play a specific role in protection against tumors and viruses. Several lines of study have shown that NK cells operate through signals delivered by inhibitory and activation receptors, yet direct evidence for activation receptors in protection against pathogens has been lacking. Brown et al. show that the NK activation receptor, LY-49H, plays a critical role in the resistance of mice to infection with cytomegalovirus. LY-49 contains immunoreceptor tyrosine activation motif-signaling motifs normally found in lymphocyte membrane receptors, which suggests that NK cells may operate through similar pathways of cell signaling as the cells of the adaptive immune response.

Science 2001;292:934