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JOHNS HOPKINS
MEDICINE

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To whom it may concern:

My name is Thomas Lloyd, and I am professor of neurology and neuroscience at Johns Hopkins University School of Medicine, and I also serve as director of the Johns Hopkins Neuromuscular Pathology laboratory and co-director of the Johns Hopkins Myositis Center. My laboratory focuses on understanding the basic mechanisms of pathogenesis of both amyotrophic lateral sclerosis (ALS) and inclusion body myositis (IBM). My lab has generated a xenograft mouse model of IBM that is currently being used to test new therapies for this devastating degenerative disease. I also direct a clinical research team and serve as principal investigator for multiple IBM clinical trials, enrolling over 200 IBM patients into a large natural history study.

While we do not know what causes IBM, there are many genetic and pathological similarities between IBM and ALS, and thus it is very plausible that environmental exposure may cause or contribute to the development of this disease. Therefore, in my opinion, it is more likely than not that disability caused by IBM in veterans is a result of environmental exposures received during active military service.

The links between ALS and IBM are striking (Lloyd, T.E., 2010, Curr Opin Rheumatol). For example, the same rare mutation in a gene called VCP (valosin containing protein) can cause IBM in some family members and ALS in other family members (Abramzon, Y. et al, 2012, Neurobiol Aging; Johnson, J.O. et al, 2010, Neuron). Furthermore, both IBM and ALS are pathologically characterized by ubiquitinated intracellular aggregates that are molecularly similar (TDP-43 positive) as well as progressive cellular degeneration with associated inflammation. Third, my laboratory recently showed that loss of TDP-43 function, as defined by specific RNA splicing abnormalities, is highly specific for the diagnosis of IBM amongst muscle diseases (Britson et al, Sci Transl Med, 2022), just as these same abnormalities are thought to be causal for neurodegeneration in ALS (Rosa Ma et al, Nature, 2022). Finally, there is clinical overlap between ALS and IBM, in that patients with IBM will typically have signs of motor neuron involvement, and both diseases lead to relentlessly progressive muscle atrophy and weakness. Thus, molecularly, genetically, clinically, and pathologically, the diseases IBM and ALS have marked similarities.

Therefore, since environmental exposures during military service have been shown to increase the risk of developing ALS, it is likely that the same holds true for IBM. Therefore, I would ask that these IBM patients receive the same VA medical benefits as they would if they were diagnosed with ALS.

Please feel free to contact me for further information.

Sincerely,

Thomas Lloyd, M.D., Ph.D.
Director, Johns Hopkins Neuromuscular Pathology Laboratory
Co-director, Johns Hopkins Myositis Center