

# MID-AMERICAN MYOSITIS KIT

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*Welcome to another  
edition of your KIT newsletter*

## Myositis & Diabetes

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Patients with idiopathic inflammatory myositis are at high risk for hypertension and diabetes, but as a consequence of their disease rather than its treatment, a retrospective Australian study found.

Among patients with dermatomyositis, polymyositis, or inclusion body myositis, 62% and 29% had high blood pressure and diabetes mellitus, respectively, according to Vidya S. Limaye, MD, of the University of Adelaide, and colleagues.

In contrast, the background prevalence of hypertension and diabetes was considerably lower in the Australian adult population, at 9.4% and 4% respectively, the researchers wrote in the May International Journal of Rheumatic Diseases.

Inflammatory myositis is among a group of autoimmune diseases characterized by skeletal muscle weakness, elevated serum creatine

kinase, and abnormalities seen on electromyography. These disorders often require long-term immunosuppression, usually with corticosteroids and second-line agents such as methotrexate.

However, prolonged use of corticosteroids has been linked to numerous adverse cardiovascular outcomes as well as to osteoporosis, cataracts, and increased risk of infections.

Epidemiologic studies have identified a strong association between atherosclerosis and other systemic autoimmune disorders such as rheumatoid arthritis and systemic lupus erythematosus, but the cardiovascular risk profile of patients with inflammatory myositis has not been previously studied.

The researchers initially set out to document the complications of corticosteroid and immunosuppressive treatment among patients with myositis. So Limaye and colleagues conducted a review of medical records and pathology reports from 344 patients who were enrolled in the South Australian myositis database between 1980 and 2009.

However, they found themselves “surprised by an extremely high background prevalence of hypertension and diabetes mellitus in our cohort,” the authors wrote.

The database included 43 patients with a histologic diagnosis of dermatomyositis, 184 with polymyositis, and 117 with inclusion body myositis.

Patients with dermatomyositis were younger, with a mean age at diagnosis of 53 years, while those with polymyositis and inclusion body myositis had median ages of 59.1 years and 67.8 years, respectively.

All patients with dermatomyositis had been treated with prednisone, as had 90% of patients with polymyositis, and 71% of those with inclusion body myositis.

The most commonly used immunosuppressive drugs were methotrexate, used in 83 patients, and azathioprine, given to 48 patients. Smaller numbers received hydroxychloroquine, cyclosporine, mycophenolate mofetil, and intravenous immunoglobulin.

The researchers first considered the presence or absence of comorbidities regardless of the timing of treatment in relation to a diagnosis of myositis.

In addition to the high prevalence of hypertension and diabetes, osteoporosis was also more

prevalent in those with myositis compared with the overall Australian adult population (32% versus 3.4%).

Ischemic heart disease and cataracts each were present in 26%, while cardiovascular disease and hyperlipidemia each were found in 13%.

To clarify whether these comorbidities were related to the long-term immunosuppressive treatment, the researchers analyzed data from patients for whom information was available on whether the complication occurred before or after their myositis diagnosis.

“In the absence of a treatment effect on the proportion of patients with the comorbidity, the pre- and post-diagnosis proportions should approximate 50%,” they explained.

Compared with the high (62%) prevalence of hypertension found at any time, in only 24% was high blood pressure detected after the myositis diagnosis ( $P < 0.001$ ).

Osteoporosis occurred more frequently after diagnosis, but this was not statistically significant ( $P = 0.09$ ). There were no increases in proportions of patients with other comorbidities in the post-diagnosis period.

The investigators also analyzed the presence of comorbidities according to the individual myositis subtypes and found that patients with dermatomyositis were more likely to

have hypertension, diabetes, and cataracts as a result of treatment rather than as preexisting conditions.

This, they said, reflects the significantly younger age of the dermatomyositis patients.

In contrast, patients with all subtypes were at equal risk of infectious complications including herpes simplex virus infections and pneumonia.

In discussing their findings of high prevalence of diabetes and hypertension in these autoimmune patients, Limaye and colleagues noted that specific autoimmune mechanisms are believed to contribute to the development of hypertension.

Autoantibodies against 1-adrenergic receptors and angiotensin II, while playing a role in hypertension, also may cross-react with myositis autoantigens and stimulate an inflammatory response in skeletal muscle, they said.

Furthermore, the excess prevalence of diabetes and hypertension in these patients may represent a link with the metabolic syndrome.

"Indeed, skeletal muscle insulin resistance is fundamental in the pathogenesis of the metabolic syndrome and recent evidence suggests inflammatory cytokines (adipokines) and aberrant activity of the renin-angiotensin-aldosterone

system (also linked with hypertension) may provide a link between inflammation and insulin resistance in skeletal muscle," they wrote.

This study had limitations, including possible selection bias, confounding factors such as age and sex, and its retrospective design.

Nonetheless, the "very high prevalence" of hypertension, diabetes, and ischemic heart disease indicates that a comprehensive assessment of cardiovascular risk is essential in patients with inflammatory myositis, they concluded.

By **Nancy Walsh**,  
Contributing Writer,  
MedPage Today

Reviewed by Robert Jasmer, MD; Associate Clinical Professor of Medicine, University of California, San Francisco and Dorothy Caputo, MA, RN, BC-ADM, CDE, Nurse Planner



# Therapy Trial Update

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The investigator conducting the the TMA-funded follistatin gene therapy trial in Columbus, OH is encouraged by the improvement seen in muscular dystrophy patients who have been treated with a slightly higher dose of the follistatin gene than the sIBM patients in the trial. This is a positive development that could have potential for sIBM patients. The investigator will now be seeking to treat the remaining 6 sIBM patients with the highest dose of follistatin possible since the higher dose seems to be producing more improvement in muscle strength.

## TMA board plans outreach to veterans

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Attention Veterans: The Myositis Association board of directors, after listening to concerns voiced at last year's Annual Patient Conference, has articulated the following as one of the strategic goals for the year 2013: "We will solicit and present resource material that will assist veterans and their families to maximize their benefits from the Veteran's Administration (VA). Resources will be made available on TMA's website and in at least one

seminar at the Annual Patient Conference."

In order for the board of directors and TMA staff to meet this goal, we need your help. If you have had experience with the Veterans Administration, either good or bad, we would like to hear from you. If you have advice for other veterans, we would like to collect that as well. The Annual Patient Conference staff and the Board of Directors are in the process of identifying suitable representatives from the VA, as well as "patient advocates" from the major veterans organizations (VFW, American Legion, etc.) to be available at the conference. If you have suggestions for content material, please let us know. The Myositis Association and its board of directors are firmly committed to assisting our veterans with myositis in any way we can – but we need to hear from you. We hope to see you in Louisville October 17-20, 2013! Please send your comments to [TMA@myositis.org](mailto:TMA@myositis.org).

## Educating health providers

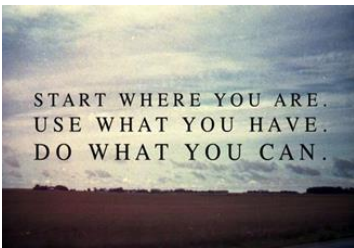
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Physician education about myositis is a major focus of TMA over the next year:

Support group members should expect increased involvement from TMA's medical advisors as TMA continues to increase physician

education nationwide. TMA's medical advisory board members will be active in their communities this year, giving presentations to local support groups and doctors who wish to learn more about myositis. Check with your support group to see if a medical advisory board member will be speaking at one of the meetings this year.

In addition to these informational presentations, TMA will be holding five "Lunch and Learn" seminars over the next year to further educate physicians treating myositis patients. TMA will also be conducting educational programs at medical schools and hospitals to educate medical students about myositis through a "Visiting Professors Program". And, TMA will be producing a publication that will serve as a guide for physicians to inform them of appropriate treatments for myositis.



## Notice:

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**An email was sent to all Mid-American Myositis members in Southern Kansas & Northern Oklahoma asking for the names, addresses and phone numbers of the doctors treating your myositis**

**condition. If you have not responded back to Jerry King with this information, please send an email at once. ([mid\\_am\\_myositis@aol.com](mailto:mid_am_myositis@aol.com))**

**This information is vital in requesting additional education and training to these doctors to provide care for you and other myositis folks.**

## Tentative Agenda 2013 Annual Patient Conference

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### Topics to be covered:

- Access to care
- Alternative and complementary therapies
- Assistive technology
- Chinese Medicine
- Coping skills
- Coping with prednisone
- Dealing with stress
- Diet and nutrition
- The future of gene therapy
- Individual insurance counseling
- Individualized disease management
- Informal disease management sessions
- Introduction to myositis
- IVIG, Acthar, rituximab
- Jo1 and other syndromes
- Lung disease
- Medication side effects
- New myositis research

Overlap syndromes  
Planning ahead  
Skin care  
Swallowing problems  
Travel planning  
Water and land-based exercise  
Your rights as a patient

**New this year:**

Apps for independence  
Building your caregiving team  
Driving assessment and rehabilitation  
New world of mobility  
Record keeping the right way  
Veterans' sessions

## Save These Dates

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### Next Mid-America KIT Meeting

Please plan on attending our next KIT meeting set for 1:00 PM, May 4, 2013 at the Civitan Community Center. Wichita, KS. Dr. Vickie Dukés will address our group. Please respond to the email 'E-vite' you will receive about 10 days before the meeting date.

### TMA National Conference

The next TMA Conference will be held October 17-20, 2013 in Louisville, KY.



Dr. Dukés will be the guest presenter at our next KIT meeting

Hope to see  
you  
May 4<sup>th</sup>!

Mid-America Myositis Kit  
(Keep-In-Touch)  
Newsletter  
*April 2013*

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