MG MATTERS

MYASTHENIA GRAVIS
MID-ATLANTIC REGION

SPRING, 2018

Spring will <u>finally</u> come forth, after Winter makes up its mind to <u>finally</u> go away. Since December our board has regenerated itself, we have new officers as well as some new members. A list is included in this newsletter.

One piece of good news is that we will have access to conference calling during the quarterly board meetings. There will be a toll-free number so you can attend by phone. This will allow those who don't feel up to coming or who can't attend in person, to be heard. This is not a computer connection so we won't have to depend on the hospital's router for communication. Support group members are always welcome to attend board meetings. This affords the benefit of a greater range of ideas and suggestions.

Sadly, our annual picnic, as a fundraiser, is no longer possible. The Board is working on other possibilities that will include both social and fundraising elements. For the foreseeable future we must depend more heavily on direct donations instead of fundraising sources.

The primary focus of MGMAR is serving those in the Mid-Atlantic region who have MG and their families. Your donations are very important to the printing of this quarterly newsletter. We offer materials pertaining to myasthenia gravis. There is a Helpline and also a small patient assistance fund to offer in emergencies. Equally important are our efforts to reach out to medical providers to assure the specialized care we need. Thank you, in advance, for all your support.

Marika Bates
Patient Advocate

Myasthenia Gravis Mid-Atlantic Region
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410-437-1157 / 1-866-437-2881

SUPPORT GROUPS

Glen Burnie SG
1st Saturday of each month
10:00 to noon
Baltimore Washington Medical Center
Glen Burnie, MD
Marika Bates
410-544-4185 / marika_bates@gmail.com
Wanda Danney
443-742-4895 / wanda.avonlady@gmail.com

Eastern Shore SG
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443-880-8271 / saundra.rn@gmail.com

Bethesda SG
3rd Saturday of each month
10:00 to noon
Suburban Hospital
Bethesda, MD.
William DeLorenzo
301-384-1299 / delorenz@umd.edu
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Office & Helpline
Lynn Waltz

Phone Buddy
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Washington, DC – Betty @ 202-203-8696
Teens – 30'ish – Crysta @ 301-741-2747

Support group leaders are also available as phone buddies

Website Manager – www.mgmar.org
Jessica Dodson

"MG MATTERS" Newsletter (quarterly)
Publisher – Lynn Waltz
Editor – Johanna Monka, RN

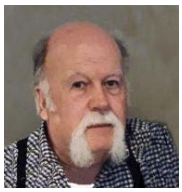
Thank you for your support

Maria Coleianne - Mr. & Mrs. Samuel Sbona
Jay & Stephanie Fowler - Russell Arnold
Carolyn & Paul Woodie - Joan McNey
Tony & Shirley Yankowsky

In Memory of Genevia Jones
Sue, Troy and Mason Miller

In Memory of David Miller
Janene Miller - Jolene Bunce
Althea & Darlene Smallwood

The Glen Burnie Support Group extends heartfelt sympathy to Dianne Gatton. Her husband, Bob, suffered a brain bleed on March 1st and passed on March 11th. His kindness, humor and hugs will be missed.
Lynn



Order this car magnet and help raise awareness. $10 includes postage!

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Always contact your own physician who knows your situation best.
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2018 National MG Conference
Hosted by MGFA

Presenting Sponsor - Alexion Pharmaceuticals, Inc.

When:
April 14 to 17, 2018
April 14 – MG Walk
April 15-17, 2018

The conference will begin
at 1:30 pm on April 15,
and conclude
by 2 pm on April 17.

Where:
Kansas City, Missouri
Intercontinental Kansas City
at the Plaza
401 Ward Parkway
Kansas City, MO 64112

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Sign up for the National MG Walk on April 14.
http://www.mgwalk.org/national/

Overview:
The National MG Conference is the largest gathering of the MG Community in the U.S. This year we expect more than 200 participants will gather to learn, share and socialize with others who understand MG personally and professionally. Content includes understanding MG and its treatment but also coping with its affects and issues in managing one's life.

Our presenting sponsor is Alexion Pharmaceuticals, Inc. the maker of Soliris (eculizumab) the recently FDA approved treatment for adult patients with generalized myasthenia gravis (gMG) who are anti-acetylcholine receptor (AchR) antibody-positive. Soliris is the only therapeutic approved specifically for gMG since Mestinon was approved in 1955.

Watch the MGFA website and Facebook for more information regarding the program

Why attend?
The MG National Conference is a must for anyone in the MG Community – with presentations and sessions on all aspects of MG from the medical to the personal and the social. MG experts, fellow patients and family members share their knowledge and experience. Participant evaluations consistently give high scores to the conference content but also to the social aspects as people with MG meet, greet and appreciate one another, comparing notes, sharing resources and just being with others "who understand!"

Join the Walk!
Make it an even better experience by joining the Walk on April 14th. This is a chance for all who don't have a Walk in their own communities to form or join a team. Team Duck Tapers, comprised of Facebook friends from around the country, was the top team at our New Orleans Walk in 2017, and they are getting organized already. So, plan to come for both the Walk and the Conference. And, the National MG Walk will take place on Saturday, April 14th, starting at 10 am. For more details and to register, please visit http://www.mgwalk.org/national/. We hope many will form or join a team and fundraise for the fight against MG!

Looking for a thrill?
For 2018 our Keynote Speaker will be author Andrew Kaufman, whose novels have been on the Top 100 lists for months, and whose book, The Lion, the Lamb and the Hunted, became an international bestseller. Andrew also has MG. Andrew's thrillers have entertained and inspired fans worldwide. Read about his next book, at http://www.andrewekaufman.com. And don't forget to checkout his work with Chicken Soup for the Soul, also highlighted on his website http://www.andrewekaufman.com/chicken-soup-for-the-soul.html. We hope you'll join us to hear about Andrew's challenges and triumphs as well as a book signing for his newest effort.

Make it a family trip or mini-vacation:
Known as the "City of Fountains," Kansas City is an exciting, hidden gem in our nation's heartland and is famous for its barbecue, fountains, jazz, creative arts scene, sports and more. With Kansas City International Airport less than 25 miles from downtown and offering extensive service from Delta and Southwest Airlines, our location at the Intercontinental Kansas City at the Plaza couldn't be better. The hotel is an easy walk to Country Club Plaza, a 15-block district with more than 150 shops and dozens of fine restaurants. Other major attractions in town are just a short cab ride away. For more about KC visit www.visitkc.com and learn more!

Delta Airlines Discount
Taking advantage of this discount is easy! Just click the "Advanced Search" link on www.delta.com and enter NMRCL in the box that says "Meeting Event Code." If your flight qualifies for a discount, it will automatically be applied to your search results.

Links to the convention can be found at
www.myasthenia.org

A Matter of Life or Debt

While the future of healthcare in this country remains in limbo, the troubling reality is that even those who currently have health insurance simply can't afford to get sick.

By Trudie Mitschang

STATISTICS SHOW that individuals juggling unpaid medical bills have ample company. According to a 2016 report, more than a quarter of Americans say someone in their household is struggling to pay a medical debt.

The reasons for this rising tide of unpaid healthcare costs are varied; some are dealing with unrelenting costs associated with managing a chronic illness, while still others have simply been sidelined by a sudden, unexpected injury or diagnosis. And, for a large number of American families, mounting medical debt can lead to financial ruin. Currently, medical debt is the No.1 cause of personal bankruptcy in the U.S. Even more troubling is, oftentimes, the most tragic losses occur for those who have health insurance. One Consumer Reports study found 30 percent of Americans with private health insurance have received unexpected bills following procedures they thought were covered. Of those, 23 percent received a bill from a doctor they didn't expect to get a bill from. And, 14 percent said they were charged higher out-of-network rates by doctors they thought were in-network.

"I was admitted January 2016 to a participating hospital for pleurisy," recalls Julie Claire, a 59-year-old from Michigan. "I spent eight days on IV antibiotics until the surgeon insisted that a video-assisted procedure needed to be performed. During the course of that procedure, the mess that he encountered, both inside and outside my lung, caused him to perform an unscheduled thoracotomy. The surgeon did not participate with my insurance, but he was the only surgeon qualified to perform this procedure. I have two deductibles to pay and copayments for each plan. My surgeon's bill alone was $10,400."

Understanding the Cost of Chronic Disease

From copayments and out-of-network costs, to insurance claim denials and appeals and the loss of wages due to disability, expenses linked to chronic illness can quickly balloon out of control. Add to that the complexity of chronic illness and the fallout from medication side effects, and it's easy to see how bills pile up. For example, many patients with Crohn's disease develop secondary autoimmune diseases such as rheumatoid arthritis, lupus and fibromyalgia, sending them on a complex journey through the healthcare system. A patient in this scenario is likely to incur overlapping expenses for each diagnosis and treatment plan, while still trying to address the original illness. Additionally, drug side effects can create serious and expensive medical problems such as the need for hip replacements that are often linked to prednisone use, or repeated hospitalizations from infections linked to immunosuppressant drugs.

Of course, medical bills are not the only factor when it comes to mounting debt; the very nature of many chronic diseases prevents patients from consistently working and earning a living. This lack of cash flow combined with accumulating medical debt can damage credit ratings, lead to harassing debt collection calls and add undue stress at a time when all mental and emotional resources are needed to simply stay on top of the disease itself. Patients often describe this scenario as adding "insult to injury."

Like other types of debt, medical debt tends to accumulate over time, especially for patients who require daily medications or ongoing care. Lene Anderson, who was diagnosed with juvenile arthritis at age 4, has used a power wheelchair since her teens and is well-versed in managing the high costs of chronic illness. Anderson makes her living as a writer and chronic illness advocate and is the author of the award-winning blog The Seated View. But, not so long ago, Anderson watched helplessly as her own slow creep into medical debt pushed her to the brink of bankruptcy. "For a long time, my medications and the costs incurred with my disability (wheelchair repair, etc.) had been accumulating," she explained. "Every month, the debt ratcheted up a bit more, and every month, I tried to pay off as much as I could. I reached a point when the minimum payments were so significant that I never paid off any of the principal, and when paying that minimum put me so far behind that I had to use credit to buy medication. It was a vicious cycle. Five years ago, I found myself paying off one credit card with another, and I knew it was time to face facts and do something drastic about it."

For Anderson, taking back control began with seeking credit counseling and considering all of her options, including bankruptcy. "For a number of reasons, declaring bankruptcy was not the ideal solution for me, so I ended up with a debt settlement plan," she said.

Tactics to Help Beat the Odds

Financial experts and patient advocates agree that mounting medical debt is a widespread problem for millions, with no Currently, medical debt is the No.1 cause of personal bankruptcy in the U.S. simple solution. While each patient's scenario is unique, individuals can take a number of practical steps if they find themselves overwhelmed by accumulating bills. Laurie Miller, a registered nurse and patient with chronic illness, advises the following:

• Check your medical bills thoroughly. Hospitals and clinics bill insurance and patients based on a diagnosis code or procedure code. This means they bill for an estimated cost of the entire procedure rather than the actual procedural costs, including the cost of paying medical professionals, use of facility equipment and the number of supplies used during a procedure. It is possible that you are being charged for items or services you don't actually need, so ask for itemized statements. If you were billed for a particular item or service you did not use, it can be removed from the bill, or the amount can be refunded to you if payment was already received.

• Be proactive; ignoring medical bills will not make them go away. When you are sick and have to go to numerous providers, as well as experience numerous hospital stays, the piles of medical bills can be enormous. You will get one

from every doctor and service provider, as well as from every laboratory and radiological facility. You will also usually be billed separately for emergency physicians and anesthesiologists. Often, if you initiate contact with the hospital business office, the staff may be willing to work with you, offer financial aid and/or set up a plan with payments that are within your means. Explain your financial situation to them, including your income and the number of medical bills you have incurred. Ask if you qualify for financial assistance, which will enable you to pay less for each bill. Just don't wait until bills are past due to explore your options.

• Ask for combined accounts to streamline payments. Oftentimes, medical bills have different account numbers for every clinic visit and every hospital visit. It is usually possible to combine those account numbers so you will only have one clinic bill payment and one hospital bill payment, but you will probably need to ask the business office staff to do this for you.

The benefit of this is that you will have one hospital/clinic payment rather than five payments going to five different account numbers at the same hospital/clinic. You will usually need to deal with the hospital business office and clinic business office staff separately.

• Don't take out a loan or second mortgage to pay off medical bills. While hospitals and health systems will often work with you to pay for your healthcare costs, most banks do not. You don't want to lose your home while trying to pay off medical bills. Remember, if you still owe money to the bank for your home, including a second mortgage or line of credit, the bank owns your home and can repossess it at any time if payments should stop. If you must, consider refinancing your home instead so your monthly mortgage payment is less. This may then enable you to contribute more toward your medical bills.

As Anderson discovered when her debt load exceeded her ability to pay, contacting reputable credit counseling services can offer much-needed relief, especially if other options to negotiate the debt are unsuccessful. These types of services are often free and can offer assistance with setting financial goals, planning a working budget and paying down debt. Sometimes, a credit counselor will arrange to receive one payment from an individual and then pay individual bills for him or her. While this may seem humiliating, it can also greatly reduce stress.

Shaking Off the Shame

The financial consequences of skyrocketing medical debt are easy to calculate. What is less obvious is the heavy emotional toll associated with unpaid bills. Illogical as it may seem, many people feel intense shame when it comes to medical debt, an emotionally toxic situation that can lead to even further declines in health. In an effort to avoid getting deeper in debt, some patients may stop seeking medical care altogether. A study in the Journal of General Internal Medicine showed that over two-thirds of those who either had current medical debt or had been referred to a collection agency reported it caused them to seek alternative sites of care or to delay or avoid seeking subsequent care when needed.

In a nutshell, patients who can't afford to pay are less likely to seek care because they are ashamed about their debt and don't want to end up owing more. Still, as Anderson learned, confronting the problem head-on can be an important first step in getting the help needed to recover mentally, emotionally and financially. "It's important to remember there is no shame in not being able to stay ahead of a debt that's incurred simply because you're sick. It's not like you're going out clubbing every night, putting champagne on your cereal and have a gold Ferrari in the garage," she says. "The money is going to medication, doctor's appointments and the tests you need to stay ahead of your condition."

New Reporting Standards Offer Collection Agency Reprieve

When you are ill, the effects of medical debt on your FICO score may seem like the least of your concerns. But unpaid accounts that go to collections can haunt people for years, limiting their ability to qualify for a home or car loan or obtain other types of credit in the future. According to a 2014 report by the Federal Consumer Financial Protection Bureau, as many as 43 million Americans have medical debt in collections that has adversely affected their credit. The study also found that for 15 million consumers, medical debt was the only blemish on their credit report. In an effort to address this issue, the three major credit reporting agencies — Experian, Equifax and TransUnion — have established a 180-day waiting period before including medical debt on a consumer's credit report. The policy went into effect in late 2017, and the new six-month period is intended to provide enough time for individuals to resolve disputes with insurers and delays in payment before their credit score takes an unnecessary hit.

Remain Proactive to Get Back on Track

Without question, navigating a maze of medical debt can make it feel as if the odds — and the bills — are stacked against a person. From an unexpected emergency room visit or the loss of a job that provided health insurance, to the long-term costs of a chronic condition, medical debt is a daily reality for one in five Americans. For those affected, digging themselves out can seem daunting or even impossible. The good news is options and resources are available, as long as individuals remain proactive and seek help while negotiation is still possible. "Don't lie to yourself," says Anderson. "I should have faced facts a couple of years before I did, but I kept telling myself that I could absolutely make a dent in my debt. This was a complete delusion. In the end, a negotiation with my creditors led to me committing to pay back part of my debts, and after five years, I have just finished that process. This situation allowed me to get a handle on my finances and even build up my savings again."

TRUDIE MITSCHANG is a contributing writer for IG Living magazine.

http://www.igliving.com/magazine/articles/IGL_2018-12_AR_A-Matter-of-Life-or-Debt.pdf

Phase 3 Trial Results Challenge the Long-held Notion of How Myasthenia Gravis Originates

by IQRA MUMAL
February 15, 2018

The results of a Phase 3 clinical trial are challenging the long-held notion that the same thymus gland mechanism is behind all early-onset cases of the muscle wasting disease myasthenia gravis, researchers report.

The team's article about the subject appeared in the Annals of the New York Academy of Sciences. It is titled "Challenging the current model of early-onset myasthenia gravis pathogenesis in the light of the MGTX trial and histological heterogeneity of thymectomy specimens."

MG occurs when antibodies attack a protein called the acetylcholine receptor, or AChR, at the juncture of nerve and muscle cells. This leads to muscle weakness.

Some people with MG have abnormalities in their thymus, a gland in the chest that plays a key role in the development of immune T-cells. The alterations can include thyroid atrophy, or shrinking; thymoma, or thymus tumors; and thymic lymphofollicular hyperplasia, or an enlarged gland.

The main objective of the Phase 3 MGTX trial (NCT00294658) was to determine whether removing the thymus would improve patients' MG over three years.

Most scientists believe early-onset MG originates solely in the thymus, where T-cells are developed and trained to fight infections. They also think it's a two-step process. The first step, they believe, is a faulty version of AChR protein activating CD4+ effector T-cells. The activation leads to the T-cells viewing AChR as an invader that they need to fight.

Scientists think the second step is the T-cells siccing two other kinds of immune cells on cells that generate AChR. In addition to recruiting B-cell antibodies to the fight, T-cells activate an immune system component called the complement, which also works with antibodies to attack invaders.

The B-cell-recruited antibodies and the ones that the complement works with attack cells containing AChR. This leads to the activation of areas in the thymus responsible for the production of the antibodies that attack AChR.

Because of the key role the thymus is believed to play in generating MG, most scientists think that removing it is the best way to treat the early stages of the disease.

But a key finding in the trial was that removing the thymus helped some MG patients a lot, but others a lot less. A possible reason for this, researchers said, is that the patients had different genetic and disease features. Another possibility they pointed to was differences in the length of time that patients had corticosteroid treatment before surgery. In fact, some patients had no corticosteroid treatment at all.

The differences in patients' response to thymus removal challenges the notion that the same mechanism in the thymus drives all early-onset cases of the disease, researchers said. The trial findings suggest that the traditional explanation of how it originates may not fully reflect the range of events that modify its course.

The team plans to look closer at the trial results for signs that other mechanisms may be involved. Part of that would be to examine surgically removed thymus tissue samples.

The traditional view of the mechanism that underlies early-onset MG could be "refined by integrating MGTX-derived histological findings in thymectomy specimens and associated clinical [patient] observation," the researchers wrote.

https://myastheniagravisnews.com/2018/02/15/phase-3-clinical-trial-results-challenge-notion-of-how-myasthenia-gravis-originates/

Clinical trials of Immune Globulin

Myasthenia Gravis is commonly treated with intravenous IG (IVIG), even though it is not an approved indication for the drug by the U.S. Food and Drug Administration. Because off-label usage can be problematic to obtain insurance coverage, IG manufactures are trying to remedy this situation by conduction trials of IG therapies to treat MG.

Grifols is conducting it Efficacy and Safety of IGIV-C in Corticosteroid Dependent Patients with Generalized MG to assess whether IVIG is safe and effective in reducing steroid use in MG patients. The Phase II study that began in June 2015 is currently recruiting patients and is projected to end in July 2018.

Grifols is also sponsoring a more traditional safety and efficacy study of MG titled A Study to Evaluate the Efficacy and Safety of IVIG-C in Symptomatic Subjects with Generalized MG. This Phase II study began in July 2015 and is projected to end in January 2018.

In May, CSI Behring completed a Phase II study that began in January 2015 titled Open Label Study of Subcutaneous Immunoglobulin (SCIG) in MG. The study enrolled 25 participants who received weekly infusions of the company's SCIG product Hizentra. No results have yet been posted.

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December-January 2018 issue

Heading Off IG-Induced Headaches

By Trudie Mitschang

PATIENTS WHO INFUSE immune globulin (IG) may experience side effects. One of the most common is the post-infusion headache. For some, symptoms can last for hours or even days, and while any type of headache can hinder daily activities, migraine-level pain can be especially debilitating. Often, infusion providers may ask patients to rate their level of pain to best determine a treatment plan. "The first thing we want to assess is the severity of the headache. We ask patients to rate their pain on a scale from one to ten," says Michelle Greer, RN, IGCN, senior vice president of sales at NuFACTOR Specialty Pharmacy. "If patients have a history of migraines, they can usually tell us if they are experiencing a headache or an actual migraine."

Pretreatment Options to Avoid Post-Infusion Pain

The patient's regimen in the days leading up to an infusion can significantly affect how a person's body responds during and after treatment. For example, dehydration is often at the root of many IG side effects. Experts recommend IG patients start drinking water, juice and power drinks the day before an infusion, and advise avoiding coffee and alcohol, both of which can lead to dehydration. Some patients have also seen good results from sipping electrolyte rehydration drinks, which are good to have on hand before, during and after infusions because they provide the body with necessary minerals and salts to function properly.

When it comes to premedication, taking acetaminophen (Tylenol) prior to the infusion is another way to ward off an IG headache. For patients with a history of migraines, premedication with their migraine-specific prescription can also be beneficial. For those with a medical history of severe headaches specifically triggered by IG, some physicians will also prescribe a steroid as pre- and even post medication. In addition, lowering the rate of infusion and giving acetaminophen and antihistamines before the infusion decreases the risk of most mild side effects, including headache. In rare cases, a particularly acute form of headache resulting from aseptic meningitis can occur following IG therapy. Typically characterized by a very severe headache, fever, stiff neck and/or aversion to light (photophobia), these symptoms signal immediate medical attention should be sought.

Treating Headaches Once They Happen

For IG patients, preventing a headache is always optimal, but if a headache has already starred, finding relief fast is a top priority. Here are some traditional over-the-counter recommendations: Nonsteroidal anti-inflammatory drugs (NSAIDS). These include medicines like aspirin, ibuprofen (Motrin, Advil) and naproxen. This type of medicine should not be taken by anyone with a history of stomach bleeding. And, a doctor or pharmacist should be consulted about possible interactions when combined with other medications.

- Acetaminophen (Tylenol). Acetaminophen may be safely taken with NSAIDs for an additive effect. Taking acetaminophen by itself is usually safe, even with a history of stomach ulcers or bleeding. It should not be taken by those who have liver disorders or three or more alcoholic drinks a day.

- Combination medications. Some over-the-counter pain relievers have been approved for use with migraine. These include Excedrin Migraine that contains acetaminophen and aspirin combined with caffeine. A similar effect can be achieved by taking two aspirin or acetaminophen tablets with a cup of black coffee.

- Migraine wraps. These flexible bands feature a removable gel pack (hot or cold) to offer therapeutic relief from headache pain.

- Aromatherapy. In this therapy, essential oils are breathed or rubbed on skin to help patients relax and change how they perceive pain. Lavender, ginger or peppermint oils are recommended to relieve headache pain.

- Magnesium. People who suffer from serious headaches such as migraines often have low levels of magnesium, and several studies suggest magnesium may prevent the wave of brain signaling, called cortical spreading depression, chat produces the visual and sensory changes common when experiencing a severe headache. Taking 200 mg to 600 mg of magnesium a day can reduce the frequency of headaches. Dietary sources of magnesium include beans, whole grains, seeds, nuts and vegetables like broccoli.

Treatment Is Available

Patients who depend on IG therapy to manage chronic illness recognize side effects are something they can learn to manage. While IG-induced headaches are very common, the good news is there are also many ways to either treat them or avoid them altogether.

TRUDIE MITSCHANG is a contributing writer for IG Living magazine.

First Report of Humanizing An Antibody Fragment To Block Alleles Linked To Myasthenia Gravis

by B. Vijayalakshmi Ayyar

Our immune system protects us from diseases and infections. It is made up of a complex network of cells and organelles, communicating and functioning together to recognize and tackle any invading foreign substance (antigen) that may or may not threaten our wellbeing. The immune system has a unique ability to recognize and remember multitudes of different antigens.

Additionally, it has the capability to distinguish between body's own ("self") and foreign ("non-self") antigens, enabling it to act specifically against only foreign invaders, without harming one's own body components. This feature is an important aspect of immune regulation achieved through continuous programming of B-cells and T-cell lymphocytes), by repetitive cycles of selection and elimination whereby self-tolerant immune cells are selected and self-reactive immune cells are eradicated during the initial stage of development and differentiation

Malfunctioning in this programming stage causes the immune cells to fail to differentiate between self and foreign leading it to attack one's own system resulting in autoimmunity. The exact mechanism that triggers autoimmunity is unknown, however, genetic factors are known to play a key role in pre-disposing one to acquire autoimmune disorders. There are more than 80 types of autoimmune diseases among which our lab focused on myasthenia gravis (MG).

MG is a T-cell-mediated autoimmune disorder caused by the presence of autoantibodies to acetylcholine receptor (AchR) – or muscle-specific tyrosine kinase (MuSK) receptors, responsible for neuromuscular transmission. MG is characterized by muscle weakness and rapid fatigue caused by a breakdown in the normal communication between nerves and muscles. Majority of the MG treatments are non-specific, owing to the poorly understood pathogenesis of the disease; complicating the search for more specific and efficacious treatment options.

Extensive research showed that certain genetic factors are associated with MG. Based on this data, we devised our strategy to selectively inhibit AChR-reactive T-cell activation by blocking disease-related DQB1 alleles (genetic factor).

For this purpose, we developed a set of mouse monoclonal antibodies (mAbs) specific to MG-associated disease-related DQB1 alleles. These antibodies were capable of inhibiting disease-specific T-cell proliferation when used in an in vitro assay using T-cells from MG-patients, showing their promise as a therapeutic.

As the antibodies were developed in mouse, they were not suitable for human treatment due to their foreign nature. To overcome this, the current study was designed to humanize an MG-specific monoclonal antibody by switching the mouse sequence with human sequence, thus, making it more acceptable for treatment. However, antibodies have complex structures with different segments accountable for different functions

We were only interested in the antigen-binding region of the antibody so we engineered our antibody to a single chain fragment variable (scFv) by grafting the antigen binding parts of the mouse antibody to a suitable human antibody framework. Antibody engineering and humanization is a complicated process which needs to be performed in a systematic manner to avoid issues with the expression and functional properties of the antibodies. The current study details the stepwise method in which a full-length antibody was engineered and humanized. The humanized scFv was then tested, in vitro, for efficacy comparing it with the parent mouse antibody. This is the first report of a humanized scFv development as a possible therapeutic for MG.

These findings are described in the article entitled Development of humanized scFv antibody fragment(s) that targets and blocks specific HLA alleles linked to myasthenia gravis, published in the journal Applied Microbiology and Biotechnology. This work was led by B. Vijayalakshmi Ayyar from Baylor College of Medicine.

https://sciencetrends.com/first-report-humanizing-antibody-fragment-block-alleles-linked-myasthenia-gravis/

Why Is Myasthenia Gravis So Difficult to Diagnose?

Beth Stein, M.D., is the Chief of Neurology at St. Joseph's Regional Medical Center and works closely with the Myasthenia Gravis Foundation of America (MGFA).

Myasthenia gravis can be difficult to diagnose, and in this video, she discusses why the clinical presentation, disease course, and symptoms of the condition make it that way.

Stein: Patients with myasthenia gravis tend to have a fluctuating disease course and I think that's the hardest part of the disease. Their symptoms fluctuate from minute-to-minute, hour-to-hour and day-to-day, which makes it very difficult for them and for physicians to diagnose. They can present with symptoms as minimal as double vision or blurry vision, and trouble swallowing, and [symptoms] can change throughout the day. Those are some of the clinical symptoms that make it very difficult for them.

Every patient is different, and each patient is different from day-to-day, which limits the ability to actually diagnose them accurately for a long period of time. Patients can come in with symptoms as mild as trouble swallowing and trouble breathing and it can go undiagnosed because they go to the wrong physicians. They'll go to an ear, nose and throat doctor, or they'll go to a lung doctor, and these symptoms keep changing. Patients won't even pay attention to these symptoms because they can fluctuate, and they think they're getting better when they're getting worse.

In general, it starts in the second or third decade of life for women, or the fifth, sixth, or seventh decade of life for men. Now that the population is aging, it happens to be more common in women than men, though there are rare instances where it affects young children and young adults, as well. The disease tends to be mild at first, as it presents with double vision and blurry vision, but it can rapidly escalate to shortness of breath where they need to be intubated and managed in a hospital. It has a relapsing, remitted course where it can be well-controlled with medication, but there can be times where it can be exacerbated and they can get very weak. In the end stages of the disease, they can develop long-standing weaknesses.

Patients often come in with fluctuating symptoms; fluctuation is a hallmark of the disease. Because it's fluctuating, sometimes physicians will mistake them as being psychotic or crazy. "How can you have double vision in the morning, and be perfect during a physician's appointment? How can you have weakness or shortness of breath and then be completely fine when you go to the pulmonologist?"

Unfortunately, sometimes [patients] are diagnosed as having psychiatric illness. Sometimes, they'll come in with weakness in an arm or a leg, or trouble swallowing, and they'll think they had a stroke. They're worked up for stroke, or other neurologic disorders like multiple sclerosis, and they can be misdiagnosed in the beginning stages. It takes an astute doctor who is well-versed in myasthenia or other autoimmune diseases to hone in on the nature of the disease in order to accurately diagnose it.

Video available at…….
http://www.raredr.com/news/why-is-myasthenia-gravis-so-difficult-to-diagnose

Phase 1 Trial of GTP-004 Initiated as Therapy for Myasthenia Gravis Treatment Side Effects

GT Biopharma has launched a proof-of-concept Phase 1 trial of its investigational therapy GTP-004 for the treatment of myasthenia gravis. The trial's primary goal is to demonstrate the therapy improves the gastrointestinal side effects of current treatments.

"I am very pleased that GT Biopharma's first clinical trial in patients with myasthenia gravis has started and I have high hopes that the GTP-004 drug will bring substantial help to patients. The start of this trial underscores our commitment to patients with neurological disease," Dr. Kathleen Clarence-Smith, CEO of GT Biopharma, said in a press release.

Currently only two medicines - Mestinon (pyridostigmine) and Prostigmin (neostigmine) - are approved to treat the muscle weakness and fatigue symptoms in patients with myasthenia gravis. Both drugs belong to the class of acetylcholinesterase inhibitors, meaning they work by blocking an enzyme called acetylcholine esterase.

While acetylcholinesterase inhibitors have been shown to be effective in halting muscle weakness, they also act on the gut, causing gastrointestinal side effects: diarrhea, nausea, and vomiting. These side effects are a considerable source of discomfort to patients and are dose-dependent, which means that often the therapeutic dose needs a decrease. As a consequence, effectiveness may be reduced.

GTP-004 is a fixed-dose combination tablet of two approved therapies - Mestinon (pyridostigmine) and an antagonist to Mestinon's gastrointestinal side effects.

Blocking the adverse effects of Mestinon will improve patients' comfort and safety and enhance their compliance to follow the treatment. Also, mitigating the side effects ensures drug efficacy at its full potential, since it wouldn't be necessary to decrease the drug's dose.

"We continue to move our product portfolio forward with major milestones. The start of our clinical trial of GTP-004 (for myasthenia gravis) represents another biotech asset that we believe could bring significant value to our shareholders," said Anthony J. Cataldo, executive chairman of GT Biopharma. "This represents not only another significant step for GT Biopharma, but also for the thousands of patients that suffer with this often-debilitating disease," said Dr. Raymond Urbanski, the company's chief marketing officer.

GT Biopharma is a clinical-stage biopharma that develops novel immunotherapies for cancers and diseases affecting the central nervous system.

Myasthenia Gravis Research & Abstracts

The following items are summaries for abstracts of professional research studies relating to MG. They are for your information only and the intention is to keep patients and providers up-to-date with current MG research.

To read the complete report, go to the link following the abstract.

Developing treatment guidelines for myasthenia gravis.

Sanders DB1, Wolfe GI2, Narayanaswami P3; MGFA Task Force on MG Treatment Guidance.

Abstract

A task force of the Myasthenia Gravis Foundation of America recently published a formal consensus statement intended to be a treatment guide for clinicians caring for myasthenia gravis (MG) patients worldwide. Its development was stimulated by the fact that there is generally no accepted standard of care for MG, and no one treatment is best for all MG patients. Also, there are few randomized trials of treatments in current use, and the generalizability of the few trials that have been successful may be difficult. Fifteen international experts in MG participated in the consensus process, which used a simple consensus to develop preliminary definitions and the RAND/UCLA Appropriateness Method to quantify agreement on treatment guidance statements for seven topics: symptomatic and immunosuppressive treatment, intravenous immunoglobulin and plasma exchange, impending and manifest myasthenic crisis, thymectomy, juvenile MG, MG with muscle-specific tyrosine kinase antibodies, and MG in pregnancy. The executive summary of the guidance statement was published with open access to facilitate access by patients and healthcare professionals, and the full statement, with extensive background information, is available online. The guidance statement is a living document that will require updates as new treatments and new information on current treatments become available.

https://www.ncbi.nlm.nih.gov/pubmed/29381223

Oral corticosteroid dosing regimen and long-term prognosis in generalized myasthenia gravis: a multicenter cross-sectional study in Japan.

Imai T1,2, Utsugisawa K3, Murai H4, Tsuda E2, Nagane Y3, Suzuki Y5, Minami N6, Uzawa A7, Kawaguchi N8, Masuda M9, Konno S10, Suzuki H11, Akaishi T12, Aoki M12.

Abstract

OBJECTIVE:

We examined the correlation between the dosing regimen of oral prednisolone (PSL) and the achievement of minimal manifestation status or better on PSL ≤5 mg/day lasting >6 months (the treatment target) in patients with generalized myasthenia gravis (MG).

METHODS:

We classified 590 patients with generalized MG into high-dose (n=237), intermediate-dose (n=187) and low-dose (n=166) groups based on the oral PSL dosing regimen, and compared the clinical characteristics, previous treatments other than PSL and prognosis between three groups. The effect of oral PSL dosing regimen on the achievement of the treatment target was followed for 3 years of treatment.

RESULTS:

To achieve the treatment target, ORs for low-dose versus high-dose regimen were 10.4 (P<0.0001) after 1 year of treatment, 2.75 (P=0.007) after 2 years and 1.86 (P=0.15) after 3 years; and those for low-dose versus intermediate-dose regimen were 13.4 (P<0.0001) after 1 year, 3.99 (P=0.0003) after 2 years and 4.92 (P=0.0004) after 3 years. Early combined use of fast-acting treatment (OR: 2.19 after 2 years, P=0.02; OR: 2.11 after 3 years, P=0.04) or calcineurin inhibitors (OR: 2.09 after 2 years, P=0.03; OR: 2.36 after 3 years, P=0.02) was associated positively with achievement of treatment target.

CONCLUSION:

A low-dose PSL regimen with early combination of other treatment options may ensure earlier achievement of the treatment target in generalized MG.

https://www.ncbi.nlm.nih.gov/pubmed/29175893

Myasthenia gravis with antibodies to MuSK: an update.

Evoli A1, Alboini PE1, Damato V1, Iorio R1, Provenzano C2, Bartoccioni E2, Marino M2.

Abstract

Myasthenia gravis with antibodies to the muscle-specific tyrosine kinase (MuSK+ MG) is a rare disease with distinctive pathogenic mechanisms and clinical features. An acute onset and predominant bulbar muscle weakness are very common and highly suggestive of the disease. On the other hand, a more indolent course, atypical ocular presentation, and signs of cholinergic hyperactivity may complicate the diagnosis. Though MuSK+ MG is still a severe disease, over the years we have observed a steady reduction in the rate of respiratory crisis and a significant improvement in the clinical outcome, both likely related to earlier diagnosis and timely treatment. Despite the improved management, MuSK+ MG patients tend to remain dependent on long-term immunosuppressive treatment and may develop permanent disabling weakness. In uncontrolled studies, B cell depletion with rituximab proved effective in most patients with refractory disease, inducing prolonged clinical responses associated with a sustained reduction of serum antibody levels. Promising results from experimental studies and case reports suggest that both 3,4-diaminopyridine and albuterol may be effective as symptomatic agents.

https://www.ncbi.nlm.nih.gov/pubmed/29266255

Most of us are "HOME SCHOOLED" in so many ways

1. My mother taught me TO APPRECIATE A JOB WELL DONE.

"If you're going to kill each other, do it outside. I just finished cleaning."

2. My mother taught me RELIGION.

"You better pray that will come out of the carpet."

3. My father taught me about TIME TRAVEL.

"If you don't straighten up, I'm going to knock you into the middle of next week!"

4. My father taught me LOGIC.

" Because I said so, that's why."

5. My mother taught me MORE LOGIC.

"If you fall out of that swing and break your neck, you're not going to the store with me."

6. My mother taught me FORESIGHT.

"Make sure you wear clean underwear, in case you're in an accident."

7. My father taught me IRONY.

"Keep crying, and I'll give you something to cry about."

8. My mother taught me about the science of OSMOSIS.

"Shut your mouth and eat your supper."

9 My mother taught me about CONTORTIONISM.

"Just you look at that dirt on the back of your neck!"

10. My mother taught me about STAMINA.

"You'll sit there until all that spinach is gone."

11. My mother taught me about WEATHER.

"This room of yours looks as if a tornado went through it."

12. My mother taught me about HYPOCRISY.

"If I told you once, I've told you a million times, don't exaggerate!"

13. My father taught me the CIRCLE OF LIFE.

"I brought you into this world, and I can take you out..."

14. My mother taught me about BEHAVIOR MODIFICATION .

"Stop acting like your father!"

15. My mother taught me about ENVY.

"There are millions of less fortunate children in this world who don't have wonderful parents like you do."

16. My mother taught me about ANTICIPATION.

"Just wait until we get home."

17. My mother taught me about RECEIVING.

"You are going to get it from your father when you get home!"

18. My mother taught me MEDICAL SCIENCE.

"If you don't stop crossing your eyes, they are going to get stuck that way."

19. My mother taught me ESP.

"Put your sweater on; don't you think I know when you are cold?"

20. My father taught me HUMOR.

"When that lawn mower cuts off your toes, don't come running to me."

21. My mother taught me HOW TO BECOME AN ADULT.

"If you don't eat your vegetables, you'll never grow up."

22. My mother taught me GENETICS.

"You're just like your father."

23. My mother taught me about my ROOTS.

"Shut that door behind you. Do you think you were born in a barn?"

24. My mother taught me WISDOM.

"When you get to be my age, you'll understand.

25. My father taught me about JUSTICE

"One day you'll have kids, and I hope they turn out just like you!"

Early wishes for a Happy Mother's Day!!

Myasthenia Gravis Mid-Atlantic Region
c/o 752 215th Street
Pasadena, Md. 21122-1370

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