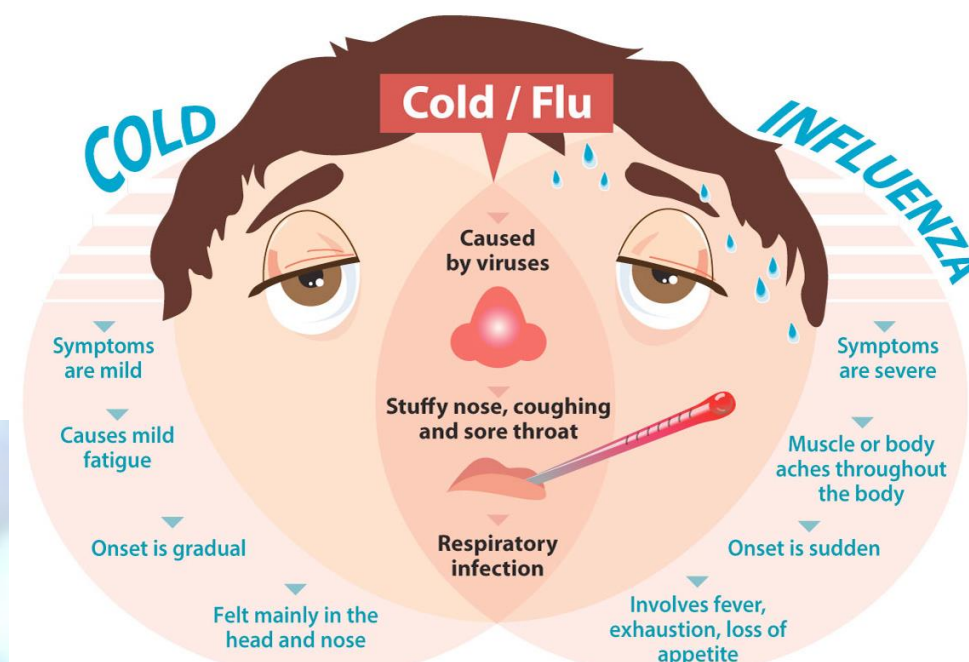


Navigating Over-the Counter Cold and Flu Remedies



As we dive deeper into the cold and flu season, it's crucial to arm ourselves with the right information to combat these seasonal foes effectively. While there's no cure for the common cold or the flu, over-the-counter (OTC) medications can provide much-needed relief from the symptoms, helping you feel better as your body fights off the virus. However, with so many options available, choosing the right medication can be overwhelming. Here are some guidelines to help you make informed decisions when selecting OTC medications for cold and flu symptoms.

1. Decongestant or Antihistamine: Which is Right for You?

The choice between decongestants and antihistamines boils down to your symptoms. **Decongestants** are your best bet for relieving nasal and sinus congestion. On the other hand, **antihistamines** are more effective for issues like a runny nose, postnasal drip, or itchy, watery eyes. Keep in mind, antihistamines may cause drowsiness, while decongestants could lead to restlessness or insomnia. People with conditions like asthma, heart disease, or high blood pressure should consult their pharmacist or doctor to choose the safest option.

2. High Blood Pressure and Decongestants

For those with high blood pressure, decongestants pose a risk by potentially increasing blood pressure and heart rate. Pseudoephedrine is a common decongestant, but if your blood pressure is well-managed with medication, it may be safe in monitored doses. However, interaction with certain blood pressure medications can be dangerous, so a healthcare professional's guidance is essential.

3. Nasal Spray Usage: A Cautionary Tale

While nasal decongestants offer quick relief, using them for more than three days consecutively can lead to rebound congestion, leaving you worse off than before. Saline sprays are a gentler alternative that can help without the risk of rebound congestion.

4. Cough Medicine: A Complex Choice

Coughing is the body's way of clearing the lungs, but persistent coughs need treatment. OTC cough medicines come in various combinations of active ingredients, and selecting the right one depends on your symptoms. Your pharmacist can help you navigate these options to find the most appropriate solution.

5. Managing Fever and Aches

Fever is part of the body's defense mechanism against infections, and lowering it is not always necessary except in vulnerable individuals. For discomfort, acetaminophen and ibuprofen are preferred options for most people, including young adults who should avoid aspirin. Remember to check the ingredients of any combination cold and flu remedies to avoid accidental overdose.

6. Soothing a Sore Throat

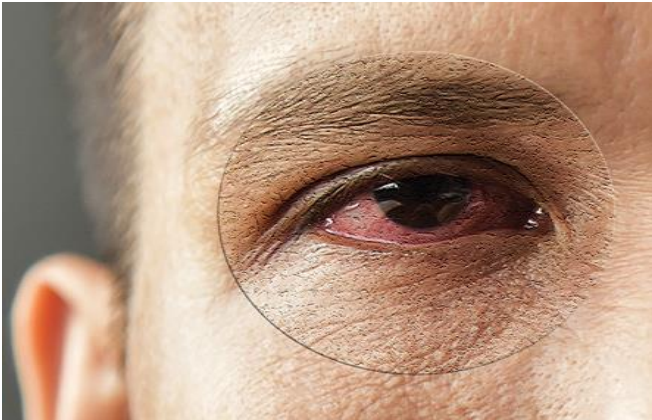
Hydration and a simple salt-water gargle can provide immediate relief for a sore throat. OTC remedies like acetaminophen, medicated lozenges, and gargles can also help but use them cautiously. Long-term use can mask symptoms of more serious conditions like strep throat, which requires antibiotic treatment.

Choosing the right OTC medication for cold and flu symptoms requires careful consideration of your symptoms and existing health conditions. Always consult with a healthcare professional before starting any new medication, even if it's over the counter. This season let's stay informed and choose wisely to keep our health in check.

Stay healthy and informed,



Battling Dry Eye Syndrome: Tips for Relief



inflammation to environmental factors like dry air and prolonged screen use. Additionally, certain medications and health conditions can reduce tear production or increase tear evaporation, contributing to the syndrome.

- Those over 50, as tear production naturally decreases with age
- Women, particularly due to hormonal fluctuations related to pregnancy, birth control, and menopause
- People with diets low in vitamin A or omega-3 fatty acids
- Individuals who wear contact lenses or have undergone refractive surgery.

What is Dry Eye Syndrome?

Dry Eye Disease is a prevalent condition resulting from inadequate tear production or poor tear quality, leading to insufficient lubrication and moisture on the eye's surface. This imbalance in the tear film can cause inflammation and damage, leading to the uncomfortable symptoms many experience. The symptoms of Dry Eye Syndrome include:

- Stinging, burning, or scratchy sensation in the eyes
- Stringy mucus in or around the eyes
- Increased sensitivity to light
- Eye redness
- A sensation of something being in your eyes
- Difficulty wearing contact lenses
- Challenges with nighttime driving
- Watery eyes as a reaction to irritation
- Blurred vision or eye fatigue

If you notice these symptoms persistently, it's advisable to consult a healthcare provider for a comprehensive evaluation and tailored management plan.

Understanding the Causes

Dry eyes can stem from various factors disrupting the healthy tear film, crucial for keeping the eyes lubricated, smooth, and clear. The reasons range from hormonal changes, autoimmune diseases, and eyelid gland

Prevention and Treatment

While Dry Eye Syndrome can be challenging, several strategies can help manage and alleviate symptoms:

- Avoid direct air flow from heaters, air conditioners, and fans towards your eyes
- Use a humidifier to add moisture to dry indoor air
- Wear wraparound sunglasses outdoors to protect against wind and dry conditions
- Take frequent eye breaks during tasks that require prolonged focus to prevent tear evaporation
- Position your computer screen below eye level to reduce eye opening and tear evaporation
- Quit smoking and avoid smoke exposure
- Use artificial tears regularly to maintain eye lubrication

Seeking Professional Care

Persistent symptoms of dry eyes should prompt a visit to a healthcare provider. Early diagnosis and treatment can prevent complications, such as eye infections and corneal damage, and improve your quality of life.

Dry Eye Syndrome is more than just an inconvenience; it's a significant health concern that can affect vision and quality of life. By understanding the symptoms, causes, and risk factors, you can take proactive steps to manage the condition effectively.

Standa Efficacy and Safety of Risperidone as A Pharmacological Intervention for Children and Adolescents with Autism



Risperidone has been found to be safe and effective in the treatment of autism spectrum disorder (ASD) in children and adolescences in reducing the core symptoms of autism. However, preliminary research has found that a more pronounced impact was observed in reducing irritability and hyperactivity compared to the other symptoms of autism, including irritability, hyperactivity, inappropriate speech, social withdrawal, and stereotype behavior. Autism Spectrum Disorder (ASD) is a complex neurodevelopmental condition with an undiscovered etiology (Manoli et al. 2022). While there is no known cure for ASD, there is currently an increased focus on pharmacological intervention to improve the quality of life for individuals affected by ASD. Over the past 15 years, there has been a continuous and significant upsurge in the worldwide prescription of antipsychotic drugs to children and adolescence (Shafiq et al. 2018). Among the second-generation Atypical Antipsychotic drugs, Risperidone received the first approval by the US Food and Drug Administration (FDA) to manage the symptoms commonly observed in children and adolescent (ages 5-16) with autism spectrum disorder (Kent et al. 2013).

Numerous randomize control trials have investigated the effect of risperidone on the participants by comparing the outcomes between the placebo and intervention groups. Most of the studies utilizing risperidone as a monotherapy, have found that risperidone can be safely and effectively used to reduce the core symptoms of autism. In both (Shea et al. 2004) and (Pandina et al. 2007) studies, during an 8-week double-blind placebo-controlled trial, demonstrated about 64% improvement in

irritability and hyperactivity among individuals (aged 3-17 years) diagnosed with ASD when treated with risperidone. Additionally, the research study, (McCracken et al., 2002), revealed that following an 8-week period of treatment with risperidone, the intervention group experienced a total of 56.9% substantial reduction in the mean score of the irritability.

Apart from that, a significant interaction was observed between the treatment group and the scores on the hyperactivity and stereotype subscales, indicating that risperidone yielded behavioral improvements in these specific aspects.

Similar to previous studies, (McDougle et al. 2005) exhibited the same improvement in the corresponding aspects. However, according to the study (Kent et al. 2013), significant improvement was observed on the score of the hyperactivity and irritability subscales among the patients administered a high dosage (1.25 mg per day) of risperidone in comparison to those receiving a low dose (0.125 mg per day). Neither the low-dose nor high-dose groups receiving risperidone showed noteworthy improvement in scores pertaining to social withdrawal or inappropriate speech subscales. Hence, it can be inferred that individuals with higher-dose risperidone demonstrate a significantly greater rate of responses, while such improvements were not observed with individuals receiving lower-dose risperidone.

Conversely, in those studies, the sample sizes were relatively modest and because of the short timeframe, the findings do not provide sufficient information about the



long-term efficacy of risperidone in this particular population. For that reason, further RCTs should involve a larger number of participants with an extended duration, in order to achieve greater precision in measuring the impact of drug. However, risperidone is not associated with the movement related disorder. Nonetheless, it is observed that the most prevalent and statistically significant adverse events for this drug include increased in appetite, weight gain, sedation and drowsiness.

Therefore, doctors must exercise caution when prescribing risperidone for the treatment of autism in patients with metabolic disorder such as diabetes.

Written by: Moytri Karmakar (ID:19346048)

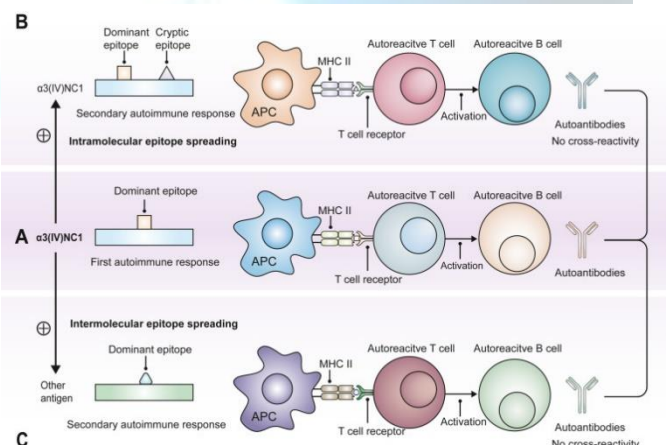
Unveiling the Enigma: Exploring Goodpasture Syndrome and Anti-Glomerular Basement Membrane Disease – Unraveling the Mysteries of Renal Autoimmune Disorder



Goodpasture's Syndrome is a rare autoimmune illness that affects the kidneys as well as the lungs. An autoimmune illness occurs when the immune system, which normally defends the body from infection, mistakenly assaults healthy components of the body. Anti-glomerular basement membrane (anti-GBM) illness is a rare, life-threatening small-vessel vasculitis that mostly affects the capillaries of the kidneys and lungs, with the majority of patients suffering rapidly progressive crescentic glomerulonephritis and 40-60% having associated alveolar hemorrhage. It is induced by the deposition of circulating autoantibodies directed against basement membrane antigens in the alveolar and glomerular basement membranes. This type of problem is most prevalent in persons between the ages of 20 and 30, or beyond the age of 60. It is not communicable, and males and Caucasians are more prone to it. These symptoms may occur as a consequence of various disorders, such as lupus erythematosus or Wegener's granulomatosis.

The autoantibody in the most prevalent form of anti-GBM illness is a polyclonal immunoglobulin G (IgG) with IgG1 and IgG3 subclasses that target the epitopes EA and EB

of the noncollagenous (NC1) domain of the alpha-3 chain of type IV collagen (alpha-3(IV) NC). There have also been a few examples where the IgG4 subclass and IgA or monoclonal immunoglobulins, have been identified. Anti-GBM antibodies may target other alpha chains as well. A retrospective research in humans discovered that antibodies against LM521 appear in about one-third of anti-GBM illness patients and are substantially linked with lung involvement. Finally, anti-neutrophil cytoplasmic antibodies (ANCA) have been reported in up to 21-47% of patients with antiGBM illness, with antibodies directed against myeloperoxidase (anti-MPO Abs) predominating over antibodies directed against proteinase-3 (antiPR3 Abs). It has been proven that ANCA positive predates the emergence of anti-GBM antibodies, indicating that ANCA may play a role in revealing cryptic epitopes. Since the discovery of anti-GBM illness, unusual manifestations have been documented. There have been other instances and series with less severe renal involvement documented. It's unclear if these milder instances are a less common phenotypic presentation of a disease with a broad range of severity or a discrete clinical sub-phenotype dictated by a different pathophysiology.



A kidney biopsy revealed bright, linear IgG deposition along the GBM in a cohort of 20 individuals with hematuria, proteinuria, minor kidney function impairment, and no pulmonary hemorrhage.

Monoclonality was prevalent, and anti-GBM antibodies were not found using standard techniques. The authors hypothesized that the milder illness pattern was due to changes in antigen specificity, Ig subclass, and capacity to attract inflammatory cells. This idea is further corroborated by the results of a Swedish study, in which four young girls with severe lung illness but minor kidney involvement presented with IgG4 subclass anti-GBM antibodies that were not detectable with standard anti-GBM tests. Considering the most common clinical manifestation of anti-GBM illness is severe, quick and

intensive treatment is advised. The treatment is based on plasmapheresis, which rapidly removes the pathogenic autoantibody, together with corticosteroids and cyclophosphamide, which suppress autoantibody synthesis and alleviate inflammation. Lockwood et al. reported this therapy in 1976, and it is currently recommended by the KDIGO recommendations. Immunoabsorption is an alternative to plasmapheresis, however it is still considered experimental treatment. It is more effective than plasma exchange in removing pathogenic autoantibodies (up to 71-86% each session) and has the benefit of minimising allergic responses. Immunoabsorption has clinical results equivalent to plasma exchange.

Written by: Syeda Maliha Tarannum (ID: 22146065)

The Role of Technology in Modern Healthcare



Modern healthcare has been transformed by the use of technology, which has increased diagnostic precision, improved patient outcomes, and streamlined clinical procedures. Modern diagnostic equipment and telemedicine platforms are just two examples of how technology is becoming a crucial component of the healthcare industry. Diagnostics is one of the areas where technology has made the biggest advances. Using cutting-edge imaging methods like MRI, CT scans, and PET scans, medical experts may see inside structures with unmatched accuracy. Early illness identification made possible by these instruments results in more effective therapy and better patient prognosis. Additionally, molecular testing and laboratory automation have sped up the diagnosis of illnesses, enabling customized treatment regimens catered to unique genetic profiles. Digital communication tools have revolutionized healthcare delivery, especially in rural or underdeveloped locations,

thanks to telemedicine. Video chats between patients and doctors now provide prompt access to care without the need for physical travel. The COVID-19 pandemic has shown this to be especially useful since it allows people to obtain medical advice while lowering their risk of exposure. However, the delicate nature of medical information raises serious issues about data security and patient privacy. Maintaining a balance between the advantages of linked healthcare systems and protecting patient data is a constant challenge.



In conclusion, technology has a revolutionary impact on how modern healthcare is provided. It has sped up medical diagnosis, increased patient access to healthcare providers, and given people greater control over their health management.

Written by: Masuma Aktar (ID: 20346027)