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VISION

To emerge as one of the premier pharmacy colleges in the country and produce pharmacy professional of global standards.

MISSION

- To deliver quality academic programs in Pharmacy and empower the students to meet industrial standards.
- To build student community with high ethical standards to undertake R&D in thrust areas of national and international standards.
- To extend viable outreach programs for the health care need of the society.
- To develop industry institute interaction and foster entrepreneurial spirit among the graduates

STUDY TO MONITOR THE IMPACT OF WATER INTAKE IN THE MANAGEMENT OF AUTOSOMAL DOMINANT POLYCYSTIC KIDNEY DISEASE

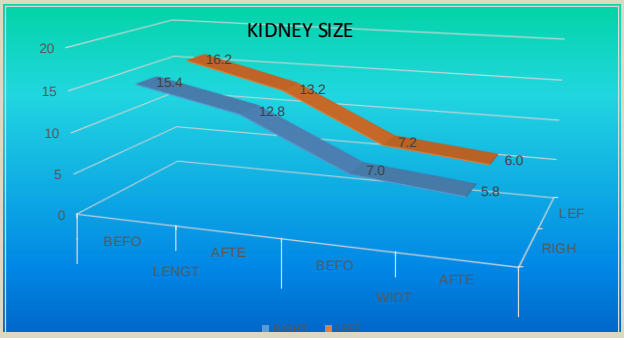
B Kiran Kumar, Pharm D Intern

Introduction:

Polycystic Kidney Disease (PKD) is an inherited disorder characterized by cystic expansion of the kidneys producing progressive kidney enlargement and renal insufficiency, in addition to various extra renal manifestations (1) The disease can be inherited in autosomal dominant and recessive forms. Autosomal Dominant Polycystic Kidney Disease (ADPKD) is characterized by slow but progressive enlargement of the kidneys with renal failure occurring by the fifth to sixth decade of life (2). Organ transplant is not a suitable advice for ADPKD patients due to lack of kidney donors, expenses and risks. In agree to that we choose drug therapy and water intake as methods to decrease kidney size, since high water intake should suppress vasopressin production, it may also slow the progression of ADPKD.

Effective Reduction In Kidney Size Of ADPKD Patients:

After the drug therapy and water intake methods, the kidney sizes are gradually decreased in ADPKD patients and it is represented in Mean values as follows (Length of right kidney size: before: 15.47, after: 12.88, left kidney size before: 16.21, after: 13.22 and width of right kidney size: before: 7.07, after: 5.82 and left kidney size before: 7.29, after: 6.05.



Effectiveness Of Intervention On Cyst Size:

The mean difference for the change in cyst size who are drinking above 2 litres of water as follows (Length: 1.03 cm and width: 0.57 cm)

Table 1: Effectiveness of intervention on cyst size (Above 2 litres)

				Mean difference
Cyst size (Above 2 litres)	**Length Mean**	**Before**	5.2	1.03
		After	4.17	
	Width Mean	**Before**	4.22	0.57
		After	3.65	

The mean difference for the change in cyst size who are drinking below 2 litres of water as follows (Length: 0.6 cm and Width: 0.55 cm)

Table 2: Effectiveness of intervention on cyst size (Below 2 litres)

				Mean difference
Cyst size (Below 2 litres)	**Length Mean**	**Before**	4.42	0.6
		After	3.82	
	Width Mean	**Before**	4.11	0.55
		After	3.56	

Interpretation of the mean difference in reduction of cyst size in above two groups suggests that the patients who were taken above two litres of water have more reduction in cyst size which reflects the effectiveness of our intervention.

Conclusion:

Polycystic kidney disease (PKD) is an inherited disorder characterized by cystic expansion of the kidneys producing progressive kidney enlargement and renal insufficiency, in addition to various extra renal manifestations. In most patients, ADPKD eventually progresses to cause end stage renal disease, requiring renal replacement therapy, either dialysis or renal transplantation.

Organ transplantation is not a suitable advice for ADPKD patients due to lack of kidney donors, expenses and risks, so that we choose drug therapy and water intake as the intervention to decrease ADPKD complications. By the significant reduction in size of the cyst and kidneys observed in our subjects, we concludes that high water intake beyond thirst is an attractive intervention to reduce the complications of ADPKD, also it is readily available, generally safe and require no expenses. It is also likely to be suitable in patients excluded from or intolerant of pharmacological therapies.

References

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MOG ANTIBODIES ASSOCIATED BILATERAL OPTIC NEURITIS WITH DEMYELINATION: A CASE REPORT

Dr. Divya Sorabadi

CASE STUDY:

A 39 years old male patient admitted to Neurology department with complaints of diminished vision in left eye followed by right eye since 1 month which is gradual in onset and progressed within 5 days. Other complaints were weakness of both lower limbs associated with urinary incontinence since 5 days. Patient also presented with history of constipation, generalized body pains, reduced capacity to work and fatigue. Patient is a not known case of hypertension or diabetes mellitus. At the time of admission patient was conscious and coherent, blood pressure was 110/70 mm of Hg, pulse rate was 70 bpm. On neurological examination, power of both lower limbs was 4/5 and relative afferent papillary defect, ataxic gait were evaluated.

Serum electrolytes, renal function tests and liver function tests were found within normal limit. MRI scan of dorsal spine showed T_3-T_{11} hyper intensity in retrobulbar region and MRI with contrast study showed altered signal intensity in cervical and dorsal spinal cord with patchy enhancement suspicious of demyelination. Anti-nuclear antibody (ANA) ELISA test revealed positive 2+ homogenous pattern for ANA by indirect immunofluorescence, indicating the presence of auto antibodies.

With the evidence of laboratory investigations, patient was diagnosed with “MOG antibodies associated bilateral optic neuritis with demyelination". Treatment was started with 5 cycles of plasmapheresis, also known as Plasma exchange (PLEX), which is often recommended for moderate to aggressive forms of optic neuritis. Due to poor prognosis of the disease, patient was advised to be in observation for 15 days and planned for 2 doses of Rituximab 500mg. Meanwhile symptomatic treatment was also given.

After giving 2 doses of Rituximab 500mg, patient was stabilized and symptoms were relieved. So patient was discharged with the medications: Prednisolone 20mg with prolonged taper in view of long term treatment, Pantoprazole 40mg once daily before breakfast, Calcium and multivitamin once daily and monthly Cyclophosphamide during follow up to reduce the number of relapses.

Conclusion:

This case implies that the early diagnosis of MOG-antibodies can differentiate the demyelination from AQP-4 antibodies positive demyelination and can treat accordingly. MOG antibody associated optic neuritis is an immunological entity with a characteristic clinical and therapeutic profile. MOG antibodies are increasingly recognized in adult patients with inflammatory CNS demyelination with a spectrum encompassing NMOSD, ADEM and unilateral or bilateral isolated optic neuritis. Currently, there are no evidence bases guidelines for the acute treatment of patients with MOG antibodies. For MOG antibody associated disease, evaluation of visual function as well as gait assessment and evaluation of bladder function are more relevant. It is necessary to test patients longitudinally to assess the Anti-MOG serostatus. Rehabilitative care is needed to prevent secondary complications of immobility and to improve functional status. Further studies with larger cohort should be needed to consolidate the findings and it potentially lead to therapeutic recommendations in majority of the MOG- seropositive patients.

Bamlunivimab – A drug of Choice for Covid 19

T Saranya, Pharm D Internee

Recently, the U.S. Food and Drug Administration issued an emergency use authorization (EUA) for the investigational monoclonal antibody therapy bamlanivimab for the treatment of mild-to-moderate COVID-19 in adult and pediatric patients. Bamlanivimab is authorized for patients with positive results of direct SARS-CoV-2 viral testing who are 12 years of age and older weighing at least 40 kilograms (about 88 pounds), and who are at high risk for progressing to severe COVID-19 and/or hospitalization. This includes those who are 65 years of age or older, or who have certain chronic medical conditions.

While the safety and effectiveness of this investigational therapy continues to be evaluated, bamlanivimab was shown in clinical trials to reduce COVID-19-related hospitalization or emergency room visits in patients at high risk for disease progression within 28 days after treatment when compared to placebo.

Monoclonal antibodies are laboratory-made proteins that mimic the immune system's ability to fight off harmful antigens such as viruses. Bamlanivimab is a monoclonal antibody that is specifically directed against the spike protein of SARS-CoV-2, designed to block the virus' attachment and entry into human cells.

The issuance of an EUA is different than FDA approval. In determining whether to issue an EUA, the FDA evaluates the available evidence and carefully balances any known or potential risks with any known or potential benefits of the product for use during an emergency. Based on the FDA's review of the totality of the scientific evidence available, the agency determined that it is reasonable to believe that bamlanivimab may be effective in treating non-hospitalized patients with mild or moderate COVID-19. And, when used to treat COVID-19 for the authorized population, the known and potential benefits outweigh the known and potential risks for the drug. There are no adequate, approved and available alternative treatments to bamlanivimab for the authorized population. As part of the evaluation of the EUA, the agency imposed several quality measures to protect patients. The company is required to implement these quality measures to manufacture this drug under the EUA.

The data supporting this EUA for bamlanivimab are based on an interim analysis from a phase two randomized, double-blind, placebo-controlled clinical trial in 465 non-hospitalized adults with mild to moderate COVID-19 symptoms. Of these patients, 101 received a 700-milligram dose of bamlanivimab, 107 received a 2,800-milligram dose, 101 received a 7,000-milligram dose and 156 received a placebo within three days of obtaining the clinical sample for the first positive SARS-CoV-2 viral test.

The pre-specified primary endpoint in the phase two trial was change in viral load from baseline to day 11 for bamlanivimab versus placebo. Most patients, including those receiving placebo, cleared the virus by day 11. However, the most important evidence that bamlanivimab may be effective came from the predefined secondary endpoint of COVID-19-related hospitalizations or emergency room visits within 28 days after treatment. For patients at high risk for disease progression, hospitalizations and emergency room visits occurred in 3% of bamlanivimab-treated patients on average compared to 10% in placebo-treated patients. The effects on viral load and on reduction in hospitalizations and ER visits, and on safety, were similar in patients receiving any of the three bamlanivimab doses.

The EUA allows for bamlanivimab to be distributed and administered as a single dose intravenously by health care providers. The EUA requires that fact sheets that provide important information about using bamlanivimab in treating COVID-19 be made available to health care providers and to patients and caregivers, including dosing instructions, potential side effects and drug interactions. Possible side effects of bamlanivimab include: anaphylaxis and infusion-related reactions, nausea, diarrhea, dizziness, headache, itching and vomiting.