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CORRESPONDENCE

Venous Angioma: New Insights from Imaging Tools

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Dear Editor,

Developmental venous anomaly (DVA), also known as cerebral venous angioma, is a congenital anomaly of blood vessels which look like the spokes of a wheel and is histologically characterized by a composition of sometimes thickened and hyalinized veins with interspersed normal neural parenchyma. It represents anatomically abnormal, low flow and low-pressure vascular structures draining into both the superficial and deep venous systems.[1] However, DVAs are physiologically normal venous outflow pathways of the brain. They occur more frequently at the supratentorial compartment, with frontal lobe predominance followed by the parietal, the occipital, and the temporal lobes.[2] They are encountered in both the pediatric and adult populations, with a slight predominance in males.[3] They are generally silent benign lesions requiring no treatment.[4] Aggressive treatment is reserved for those rare patients presenting with refractory epilepsy, repeated bleeding, intolerable headache, acute severe or progressive neurological deficits or mass effect.[1,5] Annual bleeding risk is about 0.22 - 0.34%.[4] They can be associated with other vascular anomalies, such as cavernous malformations, arteriovenous malformations, and capillary telangiectasias.

We also encountered a 40-years-old male patient who presented in the emergency ward of the University Hospital of BPKIHS with repeated episodes of uncontrollable jerking movements of the arms and the legs suggestive of focal seizures and loss of awareness followed by weakness of the left half of the body. On examination, he had altered sensorium and left hemiplegia. His baseline blood and cerebrospinal fluid analysis were normal. The contrast-enhanced computed tomography of the head showed a linear enhancing area along the gyrus in the right frontal lobe suggestive of venous angioma. The seizure was managed with anti-epileptic drugs. His motor weakness had improved on follow-up visits.

The majority of DVAs are incidental findings on magnetic resonance imaging in asymptomatic patients.[3] A clear understanding of the appropriate imaging techniques is crucial for its diagnosis. MRI is superior to Computed Tomography in detecting DVA and demonstrating associated parenchymal abnormalities such as white matter lesions, and cavernous malformations.[3] Digital subtraction angiography is reserved for patients presenting with ischemic or hemorrhagic infarction, or those with a suspicion of an associated vascular malformation. The angiographic characteristics include small radiating veins that drain into a larger trans cerebral vein that in turn empties into a dural sinus; blush and early draining veins may also be seen. Therefore, an appropriate imaging tool is very useful for the characterization of rare vascular anomalies that can be the uncommon cause of a common presentation like convulsion as well as for guiding optimal management.

Dr Ashok Kumar Yadav,
Additional Professor,
Department of General Practice and Emergency Medicine,
B. P. Koirala Institute of Health Sciences, Dharan, Nepal.
Email:dr_yadavashok@yahoo.com

DECLARATIONS

Written informed consent taken from the patient for publication. No other competing interest declared.

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Urticaria Management in COVID-19 Patients

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Dear Editor,

Urticaria is a common condition which present with wheals or hives lasting for less than 24 hours. The lifetime prevalence of urticaria is around 9%.[1] Urticaria is a common manifestation of viral and bacterial infections. Patients with corona virus disease 2019 (COVID-19) show cutaneous manifestations.2 These cutaneous manifestations in COVID-19 present as widespread rashes or commonly, urticaria.[2]

The European Academy of Allergology and Clinical Immunology/ the Global Allergy and Asthma European Network/ the European Dermatology Forum/ the World Allergy Organization guidelines recommend stepwise approach for the treatment of chronic urticaria. Second-generation antihistamines are recommended as first-line treatment for chronic urticaria. In patients not responding to the standard doses of second-generation antihistamines after two to four weeks or if symptoms are not tolerable to the patient, the dose of second-generation antihistamine is increased up to four times for control of symptoms.[3]

Omalizumab is recommended as add-on treatment to second-generation antihistamine as a third line agent. In the fourth step, the addition of cyclosporine to second-generation antihistamine is recommended in patients who do not show satisfactory control with omalizumab within six months or earlier in patients with intolerable symptoms. Treatment with the third step (omalizumab) and the fourth step (cyclosporine) are recommended under the supervision of a specialist.

In the context of the global pandemic of COVID-19 and its proven cutaneous manifestations, any acute-onset urticaria with pyrexia, with or without respiratory symptoms, if having contact with a suspect or a patient of COVID-19, has to be evaluated for COVID-19 infection. In patients with refractory urticaria and/ or atypical morphology, the decision to perform skin biopsy and histopathological examination can be individualized. For symptomatic management of urticaria, standard doses of potent, second-generation, non-sedating H1 antihistamines (e.g., fexofenadine/ levocetirizine) in twice-daily dosing can be used. In non-responders, the dose can be increased up to four times the recommended dose. Use of immunosuppressants like cyclosporine should be avoided, including those with refractory, chronic urticaria patients.[4]

Use of omalizumab can be considered in severe, nonresponding urticaria. Although specific recommendations regarding urticaria in COVID-19 are still lacking and no relevant data exists, the statement from the British Association of Dermatologists on 26 March 2020 allows the use of omalizumab in the pandemic era.[5] First two injections of omalizumab should be administered in hospital where patients can be monitored since there is a small risk of anaphylaxis. If the patients are competent and confident enough and if local home care or similar services are available on-demand, patients can be taught to self-inject the drug during the second visit so that the subsequent doses can be self-administered at home. Usually, monitoring is not required for the subsequent doses. No face-to-face follow up appointments are needed. If there are problems in providing the first doses in the hospital, it may be best to defer omalizumab treatment until COVID-19 restrictions are lifted.

General use of systemic corticosteroids in COVID-19 should be avoided owing to the potential risk of prolonged viral replication. However, the decision to use corticosteroids in urticaria should be individualized and considered only when the potential benefits outweigh the risks. If employed, they should be used for the shortest possible duration to bring symptoms under control and promptly switched to drugs like omalizumab as soon as feasible. However, giving long-term oral corticosteroids in doses above 20 mg daily, or using other immunosuppressive agents, is not recommended as a substitute for home therapy with omalizumab, to minimize the risk of increased vulnerability to severe COVID-19 disease.[5]

H1 antihistamines are one of the most commonly used medications for the treatment of allergic diseases. Sedation is one of the major concerns with the use of some H1 antihistamines, especially those from the first-generation group. Second important consideration for use of antihistamines is risk of clinically significant interactions while

using them together with inhibitors of cytochrome P450 enzymes. Similar principles of selection of antihistamines as in general patients may be applied to the patients with COVID-19 infection.

Choice of optimal agent depends on several factors including efficacy and safety particularly their ability to cause impairment of psychomotor functions and sedation. The second-generation antihistamines include cetirizine, loratadine, desloratadine, levocetirizine, rupatadine, fexofenadine and bilastine. All of these are taken once daily. The management of urticaria thus should be individualized to the patient and accessibility of the drugs in times of COVID-19 pandemic.

Sudip Parajuli, Upama Paudel
Department of Dermatology and Venereology, Tribhuvan University Teaching Hospital,
Kathmandu, Nepal.
Email: sudipparajuli@gmail.com

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