

Journal Scan

Cardiovascular events and target organ damage in primary aldosteronism compared with essential hypertension: a systematic review and meta-analysis

This is a metanalysis of studies comparing hypertensive patients with primary aldosteronism with those having essential hypertension for their cardiovascular outcomes. 31 studies were identified . Cardiovascular outcomes were assessed for 3838 patients with primary aldosteronism versus 9284 patients with essential hypertension in these 31 studies. After a median of 8.8 years (IQR 6.2–10.7) from the diagnosis of hypertension, patients with primary aldosteronism in comparison with those of essential hypertension had an increased risk of stroke (odds ratio [OR] 2.58, 95% CI 1.93–3.45), coronary artery disease (1.77, 1.10–2.83), atrial fibrillation (3.52, 2.06–5.99), and heart failure (2.05, 1.11–3.78). These results did not differ between subgroups of hyperaldosteronism based on etiology : namely aldosterone-producing adenoma or bilateral adrenal hyperplasia . Further primary aldosteronism was also associated with a higher risk of diabetes (OR 1.33, 95% CI 1.01–1.74), metabolic syndrome (1.53, 1.22–1.91), and left ventricular hypertrophy (2.29, 1.65–3.17).

Comment

If searched for vigorously, primary aldosteronism may account for anywhere between 5-10% of all hypertension patients and is thus the most common endocrine causes of secondary hypertension. A simple morning ambulatory blood test (the plasma aldosterone to plasma rennin activity ratio) can serve as a case detection tool. The importance of looking for primary aldosteronism lies in the fact, that this form of hypertension can be specifically treated by either surgery for aldosterone producing adenoma or aldosterone antagonists (spironolactone or eplerenone) for idiopathic hyperaldosteronism.

Further the present study confirms what has been suspected all along; that the cardiovascular and metabolic outcomes of hyperaldosteronism are far worse than those of essential hypertension. It remains however to be seen if selective targeting of aldosterone action in primary aldosteronism can reduce the risk of adverse cardio-metabolic outcomes back to the same level as is seen in patients with essential hypertension.

Monticone S, D'Ascenzo F, Moretti C, Williams TA, Veglio F, Gaita F, Mulatero P. Cardiovascular events and target organ damage in primary aldosteronism compared with essential hypertension: a systematic review and meta-analysis. Lancet Diabetes Endocrinol 2017.

A comparative study of CSF viral RNA loads between HIV positive patients with neurological manifestations and neurologically asymptomatic HIV patients

Authors compared cerebrospinal fluid (CSF) human immunodeficiency virus (HIV) RNA loads in 20 HIV positive patients with and 20 patients without neurological manifestations of the acquired immunodeficiency syndrome (AIDS). The various forms of CNS involvement included dementia, meningitis due to tubercular, cryptococcal, candidal and pyogenic etiologies and other CNS disorders like cerebrovascular accident, seizures, idiopathic headache and herpes zoster. Two thirds of the patients with neurological manifestations of AIDS had imaging abnormalities on CT or MRI of the brain. Mean CSF viral load was approximately 10 times higher in the CSF in patients with



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http://svimstpt.ap.nic.in/jcsr/oct-dec17_files/js.pdf

neurological manifestations (5236.3 copies per ml vs. 502.4 copies/ml). The viral loads in the plasma between the two groups were however similar.

Comment

As CNS complications are late manifestations of well established AIDS, It is not clear whether the higher viral loads in CSF observed in patients with neurological manifestations of HIV infection reflect a direct etiological role for local HIV infection in the CNS in predisposing the patient to neurological complications including dementia and meningitis or merely reflect a more severe or advanced stage of the HIV disease process in them . A comparison of CD 4+ T helper cell count between patients and controls would have been helpful. The impact of antiretroviral therapy on both plasma and CSF HIV RNA count has also not been addressed in this study. Authors suggest that CSF HIV RNA load estimation can help to confirm presence of suspected neurological involvement in patients with HIV infection.

Mathur AD, Devesh S. A Comparative Study of CSF Viral RNA Loads between HIV Positive Patients with Neurological Manifestations and Neurologically Asymptomatic HIV Patients. J Assoc Phys India 2017;65: 14-17.

Efficacy of recommended drugs against soil transmitted helminths: systematic review and network meta-analysis

This study was a systematic review of efficacy of single dose antihelminthic therapy against against *Ascaris lumbricoides*, hookworm (*Necator americanus* and *Ancylostoma duodenale*) and *Trichuris trichiura*. The primary outcome measures were cure rates and egg reduction rates. The review included 55 and 46 randomised control trials reporting the above two outcomes respectively. The drugs included in these trials were albendazole, mebendazole, levamisole, and pyrantel pamoate.

All the above drugs were highly efficacious against *A lumbricoides*. Albendazole had the highest efficacy against hookworm infestations with a cure rate of 79.5% and an egg reduction rate of 89.6% . All drugs had low efficacy against *T trichiura*, with mebendazole showing the highest cure rate of 42.1% and egg reduction rate of 66.0%. Comparison of estimates of efficacy between 1995 and 2015 showed a major reduction in the efficacy of albendazole against *T trichiura*. By 2015 the egg reduction rates fell from 72.6% to 43.4% and the cure rates fell from 38.6% to 16.4%.

Comment

In developing countries like India there is a huge disease burden of soil transmitted helminths. To ameliorate this burden single dose therapy to preschool and school aged children with a variety of antihelminthics as a preventive chemotherapy program is the preferred strategy. The present study raises concern that such a strategy may no longer work in respect of T trichuria even with mebendazole. Therefore there is a need to develop new and safe drugs with ability to eliminate all the main soil transmitted helminths with administration of a single dose.

Moser W, Schindler C, Keiser J. Efficacy of recommended drugs against soil transmitted helminths: systematic review and network meta-analysis. BMJ 2017;358:j4307.

Reviewers

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