NEWS IN BRIEF

Conservative Oxygenation in Critically Sick Children

Oxygen is one of the commonest supportive treatments in the emergency room. Both hypoxia as well as hyperoxia can have detrimental effects on the human body. Oxy-PICU study, a multicentric, open-label, parallel-group, randomized controlled trial, was conducted in 15 pediatric intensive care units (PICUs) across the United Kingdom, in which researchers compared the effect of liberal (peripheral SpO_2 > 94%) vs conservative oxygenation (peripheral SpO_2 88-92%) on the duration of organ support or death in the 30 days following allocation. 2040 children, aged ≥ 38 weeks corrected gestational age and younger than 16 years, receiving invasive ventilation and supplemental oxygen were allocated into one of the two groups. An intention to treat analysis included the outcome of 1872 children who showed a significantly lower duration of organ support or death in the first 30 days in the children receiving conservative oxygenation (P = 0.04). Authors concluded that widespread adoption of this strategy can help in improving the outcomes of sick children, and reduce the healthcare cost especially in low- and middle-income countries. (*Peters MJ, Gould DW, Ray S, et al; Oxy-PICU Investigators of the Paediatric Critical Care Society Study Group (PCCS-SG). Conservative versus liberal oxygenation targets in critically ill children (Oxy-PICU): a UK multicentre, open, parallel-group, randomised clinical trial. Lancet. 2023 Dec 1:S0140-6736(23)01968-2. Epub ahead of print*)

Ketogenic Diet for Treatment of Infants with Drug Resistant Epilepsy

The ketogenic or keto diet is a specialised dietary approach characterized by high-fat (55-60%), moderate protein (30-35%) and low-carbohydrate (5-10%) of total food intake. A ketogenic diet has been effective in reducing the seizure frequency and drug independence among pediatric and adult patients with difficult to treat epilepsy. As early onset-epilepsies have poor seizure control and association with poor neurodevelopmental outcomes, researchers from United Kingdom studied the efficacy of a classic ketogenic diet at reducing seizure frequency in infants with drug-resistant epilepsy in comparison to antiseizure medicines. A phase 4, open-label, multicenter, randomised clinical trial, recruited 136 infants aged 1–24 months with drug-resistant epilepsy (defined as four or more seizures per week and two or more previous antiseizure medications) from 19 centres across the UK. Participants were allocated to either an intervention group (receiving classic ketogenic diet, n = 78) or control group (receiving further antiseizure medication for 8 weeks, n = 58). After 12 months of follow up, the median (IQR) number of seizures per day during 6-8 weeks was comparable in the ketogenic diet group (5 [IQR 1-16]) and antiseizure medication group (3 [IQR 2-11]; IRR 1·33, 95% CI 0·84-2·11. A ketogenic diet could be used as a safe therapeutic add-on in infants whose seizures continue despite previously trying two antiseizure medications. (*Schoeler NE, Marston L, Lyons L, et al; KIWE study group. Classic ketogenic diet versus further antiseizure medicine in infants with drug-resistant epilepsy (KIWE): A UK, multicentre, open-label, randomised clinical trial. Lancet Neurol. 2023;22:1113-24.*)

Make-in-India Drugs for Rare Diseases in India: Aatmanirbhar Bharat

Rare diseases include genetic disorders, rare cancers, degenerative disorders and infectious tropical diseases, among these genetic disorders is the largest group. Though individually rare, estimates suggest that collectively the number of affected individuals vary between 6% to 8% of the population in any country, and India could have a total of 8.4-19 crore cases of rare diseases. Management of these diseases poses a significant challenge in terms of lack of information about the disease burden, making correct and timely diagnosis, complex tertiary level management involving long term care and rehabilitation, and the non-availability and prohibitive cost of treatment. In 2021, the Ministry of Health and Family Welfare, Government of India, had released the National Policy for Rare Diseases, to develop a national consortium for research and development on therapeutics for rare diseases, with an expanded mandate to include research and development, technology transfer and indigenization of therapeutics. The Ministry of Health and Family Welfare, Government of India, has recently launched the generic version of drugs for the treatment of four rare diseases - Wilson's disease, Gaucher's disease, Tyrosinemia type I and Lennox-Gastaut Syndrome. This step will bring a drastic change in the management of these patients as till now very few of these were receiving the treatment due to issues like regulatory permissions required in the importation, availability of drug and exorbitant cost of these drugs. This step will reduce the cost and thus improve the availability of these drugs not only in India but also in other low- and middle-income countries. (*Dutta SS. First 4 made-in-India drugs for rare diseases launched, 4 more in pipeline, announces govt. The Print. Nov 24, 2024*)

Rising Obesity and Myopia in School-going Children

In a recent health camp organized in 20 Delhi government schools, 22,000 students were assessed wherein their body mass index (BMI), vision and mental health status were evaluated. An alarmingly high prevalence of obesity of 69% among the surveyed children was seen; 15% children had decreased visual acuity. These findings highlight the need of an urgent action to counter the arising pandemic of obesity and myopia in Indian children. (*Gusian B. Over 15,000 students in 'red zone' of BMI in Delhi govt-run schools: Survey. News Nine. Dec 12, 2023. Retrieved from: https://www.news9live.com*)

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