NEWS IN BRIEF

Indian Solution for an Indian Problem

Japanese B encephalitis has again claimed hundreds of lives in Uttar Pradesh this year. In 2005, more than 1000 people, mainly children, died in Gorakhpur. The silver lining is that India has launched an indigenous vaccine; so far it was being imported from China. This new vaccine is the first one developed in Public–Private Partnership between Indian Council of Medical Research and Bharat Biotech. It is a Vero-cell derived inactivated vaccine. Phase III trials showed 98.7 per cent sero-protection 28 days after the first dose and 99.8 per cent sero-protection 28 days after the second dose. In the clinical trials, this vaccine (JENVAC) showed superior safety and immunogenicity, in comparison to live vaccine. It met all its primary and secondary endpoints in the age group of 1-50 years, after 1 or 2 doses. During epidemics, it can be used as single dose in mass vaccination programs; in routine immunization for endemic areas, a 2-dose schedule is recommended. The virus strain for this vaccine was isolated in Kolar, Karnataka, during the early 1980s; was characterized by the National Institute of Virology at Pune, and transferred to Bharat Biotech for further vaccine development. As Union Health and Family Welfare Minister Ghulam Nabi Azad puts it, this is "An Indian solution for an Indian problem" *(The Hindu 4 October 2013).*

Guidelines for 'Screen Time' for Children

The American Academy of Pediatrics has recommended that 'screen time' which includes TV, internet, computer, video games and cell phone usage for children should not be more than 2 hours per day; children below 2 years should have zero screen time. An average 8-year-old in the US spends 8 hours on media and a teenager's screen time exceeds 11 hours. Three-quarters of teenagers own a cell phone and 13-17 year olds send an average of 3364 texts per month. There are several studies which have linked excessive media consumption to poor health outcomes; attention problems, school difficulties, sleep and eating disorders, and obesity. In addition, the Internet and cell phones can provide platforms for illicit and risky behaviors. They have also recommended that there should be no TV or internet in children's bedrooms.

The AAP has recommended two media questions in every well child visit. How much recreational screen time does your child or teenager consume daily? Is there a television set or Internet-connected device in the child's bedroom? Parents are also encouraged to watch TV shows and movies with children to monitor media usage. It is important for parents to teach children how to critically evaluate the effect that media has on our thoughts and behavior. Children need to also spend considerable amounts of time on outdoor play, reading, hobbies, and using their imaginations in free play. Pediatricians are finally waking up to repercussions of the powerful domination by media on our children's minds and bodies *(http://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/pages/media-and-children.aspx# sthash.CY3FtxIA.dpuf, Scientific American 23 October 2013).*

Deleting Faulty Genes

A new technology called CRISPR has taken the academic world by storm. CRISPR (Clustered Regularly Interspaced Short Palindromic Repeats) has become very popular in the past year, with genetic engineers, neuroscientists and even plant biologists viewing it as a highly efficient and precise research tool. In this technology, a faulty gene can be identified and sliced off. They use a DNA-cutting enzyme Cas9 which finds its target with the help of an RNA guide sequence that researchers can now engineer to home in on potentially any gene of interest. The first target will be diseases caused by a single faulty gene copy. Simply disabling the disease-causing copy could clear the way for the good copy to take over. Five leading CRISPR researchers have got together to found a company *Editas Medicine* which aims to develop therapies which will modify faulty genes. So far conventional gene-therapy approaches have used viruses to deliver DNA — which can introduce beneficial genes, but not change faulty sequences. Another technology under development is using zinc-finger nucleases, to snip and disable genes of interest. However CRISPR is considered to be an easier and better technology *(Scientific American 3 December 2013).*

The Risks of Intermittent Drug Therapy in Tuberculosis

An article published in the BMJ discusses the need for India to shift to a daily dose treatment for tuberculosis. In 1997, on the advice of the WHO along with 132 other countries, India launched the intermittent DOTS program under the revised national tuberculosis control programme (RNTCP). Except for India and one province in China, no other country uses the complete intermittent program. Three other countries use a daily intensive phase followed by an intermittent continuation phase. Increasing rate of drug resistance and relapses prompted the WHO (in 2007 and 2010) to advise daily treatment as the preferred drug regimen for all patients with tuberculosis. Studies done in several parts of India show that even though sputum conversion rates remain at more than 85%, relapses are near 10% or more in patients who received intermittent treatment compared to 5% among patients who received drugs daily. With INH resistance, relapse rates go upto 20%. It was also found that RNTCP's regimen was contributing to more than 60% of the patients receiving retreatment—and as many as 40% of all patients with MDR disease in the programme. it's time to review our modus operandi to control the scourage of this indominatable disease *(BMJ 2013;347:f6769).*

Gouri Rao Passi
gouripassi@hotmail.com