NEWS IN BRIEF

SHORTER DRUG REGIMEN IN TUBERCULOSIS

The results of a new drug regimen trial for tuberculosis were recently published in the Lancet. The regimen, called PaMZ, is a three-drug regimen comprising of pretomanid (Pa), formerly known as PA-824, moxifloxacin (M), and pyrazinamide (Z). This Phase 2b trial, named N002, was conducted on 200 patients in South Africa and Tanzania, and included patients with both drug sensitive and multidrug-resistant (MDR) tuberculosis. At the end of eight weeks, sputum culture was negative in 71% patients on PaMZ *versus* 38% on standard drug regimens. It is expected that with this regimen, drug-sensitive tuberculosis patients will require just 4 months of the therapy, and patients with MDR tuberculosis may become disease-free by 6 months. This will be a major breakthrough in the management of both drug-sensitive and MDR tuberculosis. Once daily dosing and absence of injectable drugs will certainly enhance compliance for this regimen.

Close on the heels of these encouraging results, a global Phase-3 trial named STAND (Shortening Treatment by Advancing Novel Drugs), has commenced. In this trial, it is planned to recruit 1500 patients in 15 countries, and test the regimen for 4 months in drug-sensitive patients, and 6 months in drug-resistant patients. The regimen is likely to slash costs of therapy in MDR tuberculosis by 90%, and is also compatible with commonly used antiretroviral drugs. (*Lancet. 2015 Mar 17. pii: S0140-6736(14)62002-X. doi: 10.1016/S0140-6736(14)62002-X.*)

MONITORING ARTEMISININ RESISTANCE

Mutations in the *K13* gene are the major determinants of *P. falciparum* artemisinin resistance. This discovery followed very quickly after artemisinin resistance was first noted in Cambodia. This affords a real possibility of mapping and monitoring spread of resistance, unlike what happened with older antimalarials. For instance, chloroquine, sulfadoxine and pyremethamine resistance was already rampant in Africa by the time their molecular markers (Pfcrt, Pfdhfr, and Pfdhps) were discovered. Researchers from Myanmar have documented a detailed molecular study of K13 from *P falciparum* field isolates obtained from symptomatic patients at more than 50 different sites in the country during 2013-14. Their countrywide collection of samples is associated with a predictive, fine-scale (5 × 5 km) geospatial representation of the prevalence of K13 mutants. This data can be used to predict mutants in unsampled populations in and around the area. The molecular data provide strong evidence that artemisinin-resistant falciparum malaria in Myanmar extends across much of Upper Myanmar, including areas close to the Indian border in the northwest. This enables national programs to obtain clear and useful information about the extent of resistance, and thus implement appropriate actions. Real-time detection and monitoring of the geospatial distribution of antimalarial drug-resistant parasites is now a possibility, as is prevention of their dissemination in neighboring endemic areas. *(Lancet Infect Dis. 2015;15:415-21. doi: 10.1016/S1473-3099(15)70032-0)*

THE 5 KEYS TO SAFER FOOD

Food production is now industrialized. Errors in packaging and distribution can have global footprints. This year's World Health Day on 7th April is being dedicated to food safety. The WHO has released a simple checklist called the 5 steps to food safety: (*i*) keep clean; (*ii*) separate raw and cooked; (*iii*) cook thoroughly; (*iv*) keep food at safe temperatures; and (*v*) use safe water and raw materials. By these simple messages, the WHO hopes to curb the 200 odd diseases spread by contaminated food which kill more than 1.8 million people around the world. The WHO has released a manual for training of food handlers, home makers, school children and others who are involved in the food production chain. Many simple and pertinent points are discussed such as hand washing, cleaning cooking surfaces and pest control. They suggest that it must be ensured that food reaches at least 70 degrees during heating. Cooked food should not be left at room temperature for more than 2 hours or in the fridge for more than 3 days. Leftovers should not be reheated more than once. (*http://www.who.int/foodsafety/areas_work/food-hygiene/5keys/en/*)

GUIDELINES FOR CHRONIC HEPATITIS B

The WHO has released its first guidelines for the management of patients with chronic hepatitis B infection. The evidence of cirrhosis may be determined based on simple non invasive tests such as the APRi (aspartate aminotransferase-to-platelet ratio index) and FIB4 index (based on age, aspartate aminotransferase and alanine aminotransferase levels, and platelet counts). Transient elastography or the Fibroscan may be used where cost is not a concern. It is recommended that all adults and children with chronic hepatitis B infection with cirrhosis must be treated regardless of HBeAg status, ALT levels or HBV DNA. For children aged between 2-11 years, entecavir is recommended. Monitoring and discontinuation protocols are also clearly outlined. (*http://apps.who.int/iris/bitstream/10665/154590/1/9789241549059_eng.pdf?ua=1&ua=1*)

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