TB/Aids a threat to KZN

Tuberculosis is a deadly disease. In SA, thousands of people are receiving treatment for it. On World TB Day today, **Kamcilla Pillay** speaks to an expert.

ONE third of the world's population is infected with TB. In 2015, 10.4 million people around the world contracted it. According to the World Health Organisation, there were 1.8 million TB-related deaths in 2015 globally.

This makes TB the world's most dangerous infectious disease. South Africa, one of six high-burden countries in the world, is also treating patients suffering from extensively drug-resistant TB (XDR TB), a type of multi drug-resistant tuberculosis (MDR TB), which has also become a dangerous worldwide problem.

This, said Dr Nesri Padayatchi, the deputy director of the Centre for the Aids Programme of Research in South Africa (Caprisa) and honorary lecturer at the UKZN Department of Public Health and a scientific expert in drug-resistant tuberculosis, was compounded by HIV infection, with an estimated 70% HIV-TB co-infection rate.

"Half a million South Africans become sick from TB every year and KwaZulu-Natal has the highest rates of TB and HIV infection in South Africa."

According to the recently released Statistics SA report "Mortality and causes of death in South Africa, 2015: Findings from death notification", she said, TB remained the leading cause of death in South Africa.

"There is no time for complacency if the government targets to reduce TB deaths by 90% and reduce TB cases by 80% by 2030, are to be realised. The incidence of drug resistant TB is increasing and is concerning." The most serious type of drug resistance, XDR-TB, she said, occurred when a patient developed resistance to at least four first-line and second-line drugs used to treat tuberculosis.

"XDR-TB is also transmitted by direct infection with a resistant strain and is as infectious as ordinary TB, but much more difficult to treat. KwaZulu-Natal houses half of South Africa's burden of XDR-TB."

Padayatchi said the admissions for MDR-TB in KwaZulu-Natal had increased by 400% over the past six years and admissions for XDR-TB had increased from fewer than 10 to 162 admissions per year.

"The high rates of HIV in South Africa have resulted in the increase in TB infections. Studies have shown that 83% of TB patients are HIV co-infected."

She explained the CAPRISA 003 TB-HIV treatment study showed that deaths in TB-HIV co-infected patients could be substantially reduced with integrated antiretroviral therapy (ART) and TB treatment.

"The findings have impacted in the revision of the World Health Organisation (WHO), US Department of Health and Human Sciences and South African guidelines on the treatment of patients with TB-HIV co-infection.

"The results of this Caprisa study have shaped the global approach to treatment of TB-HIV co-infected patients.

Dr Nesri Padayatchi with a XDR-R TB patient at Ethekwini Research Clinic. PICTURE: MOTSHWARI MOFOKENG

"It is estimated that the implementation of this approach to TB-HIV treatment in South Africa could prevent about 10 000 deaths each year."

The current treatment regimen for XDR-TB patients, she said, had an extraordinarily high pill burden combined with a daily painful injection daily six days per week for six to eight months, even for babies.

"After the course of injections is completed the oral medication has to be continued for 18 to 24 months. The drugs have serious side effects such as causing deafness, kidney and liver damage.

"Treatment adherence remains a global challenge. Research by our team in KwaZulu-Natal shows adherence to drug resistant TB medications is 67.7% and is significantly lower than adherence to ART which is 88.2%."

Padayatchi said the TB Alliance's ongoing study, Nix-TB, had been hailed as a treatment "breakthrough" for XDR-TB.

"The trial tested three anti-TB drugs for drug resistant TB: bedaquiline, pretomanid and linezolid.

"The study found that after six months Mycobacterium tuberculosis could not be cultured from the participant's sputum.

"The results are welcomed and larger trials to test the drug interactions with antiretrovirals are required."

As a matter of urgency, she said, governments needed to support the development of treatment for paediatric XDR-TB that reduced the levels of toxicity and side effects in babies.

"Pause for a moment and reflect on how the current aggressive, limited treatment options for XDR-TB are being administered to babies.

"There are no options. TB, an airborne infectious disease is extremely dangerous, but potentially curable.

"We cannot be complacent if this epidemic is to be controlled."

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