XDR-TB OR NOT XDR-TB? *THAT* IS THE QUESTION

Dr Tony Moll, principal medical officer at the Church of Scotland district hospital at Tugela Ferry helps a patient with her ARV drug compliance.

A top-level think tank on KwaZulu-Natal's perplexing 'outbreak' of XDR-TB has recommended urgent inpatient point prevalence surveys and better screening of HIV-positive TB-symptomatic patients in order to better assess its country-wide extent.

Speaking after provincial health, World Health Association (WHO) and Medical Research Council (MRC) officials met in Pietermaritzburg at the end of March, Dr Bruce Margot, KwaZulu-Natal's TB chief, admitted: 'We're still on tenterhooks'.

He said that 'within 6 - 9 months we'll know whether we need to panic or whether we can be a lot more confident and relaxed'.

Margot admitted that inpatient screening was not 'part and parcel' of routine TB surveys and that HIV-positive TB-symptomatic patients were being missed on an unacceptable scale.

Ethical clearance for the inpatient surveys is expected by mid-May. The news has TB programme managers across the nation waiting to exhale in spite of initial emergency XDR-TB surveillance results revealing that 64% of cases until February were confined to the Tugela Ferry district hospital in KwaZulu-Natal.

Fears of a nightmare country-wide XDR scenario, heightened by isolated but ongoing XDR diagnoses in every single province since the Tugela Ferry outbreak (2 years ago), exist precisely because of a lack of proper XDR surveillance and adherence to treatment guidelines.

Margot and Dr Tony Moll, the Church of Scotland Hospital (Tugela Ferry) principal medical officer, concurred that with the anomaly of 55% of TB cases being XDR and just 45% being MDR at Tugela Ferry, the XDR outbreak there remained an enigma.

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Moll said this remained deeply puzzling but that with global TB experts now probing the phenomenon with Pepfar and Doris Duke Foundation funding, he was hopeful that an explanation would be found.

Significantly, Moll added that if his own surveillance at Tugela Ferry had been confined to just TB suspects in his outpatient department, 'we would not have found any XDR'. This points to a 'tip of the iceberg' phenomenon, but Margot quickly added that in KwaZulu-Natal sites where surveillance was strong and the context was similar to Tugela Ferry (high HIV and TB rates), XDR prevalence was dramatically lower.

'There is something unusual happening there that we just don't understand,' he said. According to the national TB programme manager, Dr Lindiwe Mvusi, by early March this year 185 lives were lost among the 314 confirmed XDR cases country-wide.

Treatment intervention 'working'

She said that second-line drugs, obtained last October, 'seem' to be working and that treatment efficacy was improving. She has also urgently commissioned a policy-informing probe into how many patients had been on treatment before and how many were primary XDR cases.

Mvusi emphasised that nearly all the Tugela Ferry deaths had occurred before October last year. 'Overall we were fortunate because we were not using capreomycin on a wide scale (it was not included in treatment for second-line MDR-TB) and we did not have PAS in the country, so there was very minimal resistance to these two,' she said.

The registration of the two drugs was fast-tracked so they could be used in combination with other drugs to which XDR patients were still sensitive.

The unique local 'outbreak' stirred international interest, sparking several southern African tactical think tanks and currently has the WHO hard at work generating best practice treatment guidelines.

Only 347 XDR-TB cases had been documented world-wide at the time of the KZN outbreak. Mvusi said the initial impression amid all the 'media hype' was that XDR-TB was spreading fast to other provinces. However, hurriedly implemented retrospective and current XDR surveillance of cases between June 2005 and early March this year had since revealed the Eastern Cape (33 cases and 5 deaths), Gauteng

(13 cases with 2 deaths) and the North Western Cape (10 cases with 4 deaths) to be way behind KZN (228 cases with 171 deaths). Limpopo (5 cases and 1 death) and Mpumalanga (1 case and no deaths) were the least affected.

Poverty, infrastructure pointers

Of the new policy-informing probe Mvusi said: 'We need to find out what has contributed to the outbreak and yes, we do have some initial ideas from MDR and ordinary TB studies'.

Drug defaulters had cited health care worker attitude, inability to tolerate drugs on an empty stomach, fears of job losses and substance abuse as major obstacles to adherence and treatment. Mvusi said she suspected the same dynamics, plus nosocomial infections, to be at play in the emergence of XDR-TB.

Tugela Ferry's Tony Moll, whose sleuthing upon being confronted with non-ARV-compliant HIV/TB cases just months after the ART roll-out led to the initial XDR discovery, believed he had uncovered the tip of an iceberg. Asked at the time why the Church of Scotland Hospital at Tugela Ferry was so badly affected, he said it was 'only because we were looking for it'.

Mvusi said blaming the outbreak solely on HIV was insufficient explanation. (Recent studies show that 58% of TB patients are co-infected with HIV.) 'We need to do an epidemiological assessment to understand exactly what is going on in Tugela Ferry (where poverty and HIV are rampant), plus talk to the mining industry in the North West, Free State and Gauteng and correctional services, especially in the Northern Cape'. She said they could not link a single index case after doing genotyping at the Church of Scotland Hospital (Tugela Ferry). This 'clearly showed' that it could have been nosocomial, but probably indicated that it was more likely 'a generalised thing in the community'.

Airborne infection control urgent

It also pointed to the urgent need for strengthening airborne infection control measures in all hospitals. Mvusi also mentioned social welfare grant problems that were associated with HIV/AIDS and singled out the soon-to-be-discontinued practice of temporary disability grants going to people with CD4 cell counts of below 200.

'This may have perpetuated voluntary treatment interruption so they could qualify for the much-needed monthly cash grant by deliberately becoming unwell,' she mused.

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Much more data were needed on how many XDR patients were also HIV positive (all the Church of Scotland patients are) and how they were faring on the current improved treatment options.

Margot told *Izindaba* that every 'banked' specimen sent to the Nkosi Albert Luthuli Hospital laboratory in Durban from anywhere in the province from between January 2005 and October last year was tested for sensitivity to second-line drugs. This revealed that (excluding Tugela Ferry) XDR-TB existed at 34 sites in the province (86 specimens tested positive).

Since November last year every TB specimen sent in for culture was tested for second-line drug sensitivity and a further 25 XDR patients were identified. He explained that a specimen was only classified as XDR if it was resistant to fluoroquinolones and 'one of the three injectables'.

'There was nothing like Tugela Ferry anywhere else in the province. I think it was because there was quite strong nosocomial infection taking place there, but the bottom line is that infection control is ignored globally.

Margot described the Tugela Ferry outbreak as 'a big bang on the head that woke us up – now everybody is wheel spinning to strengthen infection control'. From the 34 KZN sites where retrospective studies were conducted, 5 had been identified for short-point prevalence surveys where every 'TB suspect' would be tested, starting with Mosveld Hospital in the Jozini (north coast) area.

Experience at Tugela Ferry had taught them that 500 'suspects' were needed to garner 100 culture-positive suspects and they had screened over 383 'suspects' at Mosveld at the time of writing, with 74 TB-positive, 8 MDR but no XDR yet detected. Margot said it was 'too early' to tell how effective treatment would be on the 27 surviving XDR patients across the province. All were switched to capreomycin and PAS in the second week of December. It normally took 6 months to see culture conversion. 'My gut feeling tells me that what we're seeing at Church of Scotland is unique in its severity and I think our continued prevalence survey will confirm this – but what we've know for some time is that we're under-diagnosing "ordinary" MDR-TB'.

While the XDR was 'very worrying, it's a sigh of relief that we're not seeing it to the same extent as at Tugela Ferry – that would have been a nightmare'.

Hospital beds a headache

The XDR drama had nevertheless created major pressure for more hospital beds and the 240-bed TB referral hospital, King George V, was unable to handle the rapidly increasing work load. His team had identified and drawn up business plans for 7 MDR satellite management centres, which would push bed availability to 703 by July this year.

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Derelict wards at the Don McKenzie Hospital at Botha's Hill and Charles James Hospital in Amanzimtoti had been renovated, enabling the FOSA TB hospital in Durban to decant 'problematic and retreatment' patients into them, opening FOSA for MDR patients.

Margot said data revealed 279 mono-resistant and true MDR cases in the province in 2000, jumping to 772 by 2005 (mono and MDR), with 683 true MDR (*no* mono figures available) recorded last year.

Urgent priorities included the 'beefing up' of staffing (for counselling, recording, checking and following up), infection control and bigger, less crowded facilities and sufficient beds. 'There's a huge demand for additional beds not just for XDR but for recurrent and ill TB patients as numbers from the HIV pandemic increase – obviously we have to turn back the HIV pandemic, we have to turn that tap off and lift people's immune systems with the ARV programme (KZN has an estimated 8 000 patients on ARVs).

Margot praised the provincial and the national treasuries who 'gave us whatever we needed'. The structural work on developing MDR and XDR satellite centres would cost a minimum of R25 million, of which some R2.5 million was spent between January and March this year. 'We want to spend it all by July this year – particularly on MDR and XDR infrastructure,' Margot added.

TB burgeoning

Mvusi said that nationally there were 302 000 cases of ordinary TB in 2005 with a 'substantial increase' expected when the 2006 data came in. She said there would be a sharper focus on 'following up' of patients and on strengthening the country's referral system. 'There needs to be proper monitoring at clinic level and wherever we have volunteers and NGOs with a proper system to trace defaulters and contacts'. She appealed to private GPs to 'pitch in' with screening and tracing.

'They could enter into agreements with their districts or sub-districts to supply treatment, help us with education and counselling and get patients to report back to their sub-district so we can get outcomes. We'll give them drugs, they could help us look after patients and report the results to us so we have the data link.'

The Foundation for Professional Development (FDP), in collaboration with the World Medical Association, is piloting an online MDR and XDR distance education course for doctors who have completed the basic clinical management TB course. FPD programme director, Ms Almie Castleman, said with adjustments from the initial 35 participating physicians, it would probably be available from May or June this year.

It will be free of charge on the WMA website with a link to the FPD website.

Castleman can be reached at elmiec@foundation.co.za.

Chris Bateman

NO QUOTAS PLEASE, WE'RE NEW SOUTH AFRICANS!

Nearly three dozen delegates at the Junior Doctors Association of South Africa's (Judasa's) annual general meeting this March agreed to cast aside 'apartheid baggage' and spontaneously voted in a predominantly black and female executive.

Rejecting a proposal for gender and race quotas that would have meant amending Judasa's constitution and closely mimicking the prolonged drama in their parent body, SAMA, delegates agreed that 'competence' be the overriding election criteria.

Said Duan Lemmer, the outgoing chairperson: 'What was really encouraging during the hour and a half debate was that people from previously disadvantaged groups said that if they were elected they wanted it to be for competence and not gender or race'.

Contrary to previous AGMs there were delegates from every one of the nine provinces at the gathering, held at SAMA's Pretoria headquarters.

'Don't emulate our parent body'

Lemmer spent time briefing the Judasa AGM on the recent history of SAMA's racial and gender transformation and its ongoing struggle with constitutional change, urging delegates to live up to their reputation as a new forward-looking generation.

SAMA's council appointed a Constitution Transformation Task Team (CTTT) 4 years ago after initially amending its constitution to ensure that all SAMA committees had 50/50 representation from former 'partner groups' and the apartheid-era Medical Association of South Africa (MASA).

The redefining of the SAMA on non-racial lines was marked by fierce inter-personal clashes, resignations, forensic probes and threats of litigation that still reverberate through the organisation today. The CTTT is due to report to the full SAMA council this July amid strong lobbying that it finally disband and let the executive decide on its recommendations.

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