



## FINE NEEDLE FINESSE



Professor Colleen Wright.

Tens of millions of rands are being wasted annually through unskilled aspiration of mass lesions and incorrect smears being submitted for analysis, according to Professor Colleen Wright, Chair of Anatomical Pathology at Stellenbosch University. Wright who, as head of the National Health Laboratory Services (NHLS) at Tygerberg Hospital, runs the Fine-Needle Aspiration Clinic there, says half of all specimens submitted for analysis are simply 'unusable' for diagnosis.

She firmly believes that most young doctors overestimate their FNA skills. 'When I give them a short tutorial on what you can and can't aspirate, complications they can anticipate and how to perform the procedure, they look at me as if to say, ja, ja, we know – but very few can do it properly – you just have to look at the specimens we get'.

Using Board of Health Care Funder codes and an annual average of 3 000 FNAs done in Wright's Tygerberg Hospital laboratory, the SAMJ calculated that by increasing adequate FNA specimens to 90%, about R5 million could be saved in health care costs. The national tally almost certainly exceeds tens of millions of rands.

Wright claims that the inadequacy rate for registrars who spend three months training in the FNA clinic at Tygerberg is less than 10%. 'As far as

I'm concerned a 90% strike rate indicates competence,' she added.

In the Western Cape, where tuberculosis is more prevalent than in any other province, FNA's take on an added significance in clinics and peripheral hospitals.

Extrapulmonary TB (of the lymph nodes) has begun to skyrocket with the onset of the HIV pandemic. According to Wright, where the Tygerberg FNA clinic saw virtually no cases two years ago, it now sees at least two daily.

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FNA of these nodes is the simplest, quickest and most cost-effective way to obtain a diagnosis. A definitive diagnosis can be made the same day as an outpatient procedure and a significant number of patients can start treatment immediately. FNA also provides a means of obtaining material for TB culture, which is increasingly important as the numbers of patients with multidrug-resistant strains of the TB organism increase.

Says Wright, 'At the moment we are trying to see how effective FNA of children with clinically suspected extrapulmonary TB can be at Tygerberg Children's Hospital'.

She added that in HIV-positive children it is particularly important to make a diagnosis and start treatment the day they are seen as they could develop complications very rapidly.

While poor FNA technique and oversized syringe needles (Wright says the international definition recommends

using one no larger than 22 gauge) are partly to blame for unnecessary costs, the majority of problems relate to the preparation of smears.

The pity of it, claims Wright, is that this can be addressed with a 1-hour tutorial.

She uses a chicken breast wrapped around a piece of chicken liver to teach her students – with excellent results.

But the general lack of expertise results in her laboratory being sent 'one slide where all the material is clumped in the middle and we can't interpret it. What we need is two smears, one spray-fixed and one air-dried and clinicians should perform two passes every time they perform an aspirate, each sample giving two slides'.

This would hugely reduce inefficiency, patient discomfort and cost. When an FNA is inadequate and the patient has to undergo a biopsy the costs skyrocket unnecessarily.



Wright spray-fixes a smear.

Long hospital waiting lists for procedures, additional costs in admission, anaesthetics, materials and procedures, plus histopathology (more expensive than cytology), all underscore the efficacy of FNA, which can see a patient back at work the same day.

Wright says the budgetary implications for public hospitals, where a patient can remain in a ward for up to two weeks awaiting a biopsy, are 'pretty massive'.

Chris Bateman