Lesotho Medical Association Journal





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Table of Contents

PRESIDENT'S NOTE	. 2
EDITORIAL	
Reaching Goals	. 3
M Mokete	

RESEARCH ARTICLES

The Time from Initiation of a Stavudine-based Regimen to the Substituion of Tenofovir for Stavudine due to Lipodystrophy or Peripheral Neuropathy A Tiam, H. Osman, S. Jespersen, S Taksdal, M. Malimabe	4
Case Study: A Sixty-Five year old Man with Mutations to ARVS A Tiam, H. Osman, S. Jespersen, S Taksdal, M. Malimabe	9
ART (Traumatic Restorative Treatment) in the Field of Oral Health	2
Getting to Know your Client in Lesotho 1 M Mokete	14
Announcements 1	.7

From the President's Pen

Colleagues,

With the advent of next Annual General Meeting which marks a passing of one year of our being re-elected into the office we wish to briefly reflect on the key milestone of the past year and establish a platform for the next committee:

- Guarantee security for our office with an alarm system.
- Connect with a German and South African (Stellenboch) University, our continuance in the fight against HIV and AIDS by exhaustive scientific studies.
- Establishment of our Website for our generation of doctors (Lesotho-Boston Health Alliance: <u>www.lesothodoctors.com</u>).
- Our active participation with the National Drug Supplying Organization has continued.
- It was privileged to participate in a 3 day 51 presentation annual generation conference of the Botswana Medical Association focused on Cancer.

We have lost two of our Doctors; Dr. Okkar Htun (and also his wife) and Dr. San Lwin Oo due to a road traffic Accident (25/05/08). These were very hard working colleagues whom we will really miss.

This and others have been the most notable happening in this past 2007- 2008 year.

I also wish the new committee to be elected in a few weeks time the best as they endeavour to consolidate the medical confraternity.

Long live L.M.A.

Dr. A.M. Mojela

Editors

Dr. M. Mokete Dr. Mohapi Dr. Lekhanya

Instructions for Authors

The Lesotho Medical Association Journal accepts editorials, original research papers, review papers, case discussions, clinical guidelines, letters and Lesotho medical news reviews.

The author should submit both an electronic and hard copy of the manuscript to the address below:

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Reaching Goals

M MOKETE, MD

In 1978, 12th September, Alma ATA Declaration was adopted by several governments, represented by their ministers of health and assisting officials in the city of ALMA ATA in the then U.S.S.R. Lesotho was also represented.

The watershed Declaration advocated "health for all" by the year 2000 as health was affirmed as a fundamental human right, underpinned by "a state of complete physical, mental and social well being and not merely the absence of disease or infirmity". ARTICLE III underlined economic and social development based on the new "International Economic order" for "better quality of life and world peace". Grassroots right and duty of people to participate individually and collectively in the planning and implementation of the healthcare" was stressed in article IV. Primary health care was to be practical, scientifically sound, socially acceptable, accessible and above all affordable.

By the time the Declaration was signed Lesotho, already, had a head-start with the training of the health professionals: village health workers, nurse assistants, doubly qualified nurses (general and midwifery), nurse clinicians, who bridged the gap between the doctor and all allied cadres. Extended programme of immunization flourished. Training of doctors sporadic as it was, was intensified. The health system, both government and Christian Health Association had good hallmarks of primary health care which were the envy of other developing countries.

With the dawn of the new millennium which was the target for achieving "health for all" WHO, UNICEF, respective member governments, and the United Nations realized that the goal posts had to be moved to 2015 as both the man-made and natural tribulations of this world had not allowed achievements to keep pace with time. Hence Millennium Development Goals which in fact reinstate the same principles of primary health care with the need to intensify the efforts to wipe out poverty and hunger, make sure that everybody is educated in order to promote healthy and sustainable environment, and create an environment which will accept gender equality and empowerment of women, who are always in the forefront in the care of children for healthy upbringing (reduction of child mortality).

The question is where are we now? Lesotho at the time of ALMA ATA Declaration had 1:15000 Doctor patient ratio and 1:8 Doctor nurse ratio or 1 nurse to about 2000 patients.

The ratios seem to have stabilized after 30 years—a whole generation—because of brain drain. The Ministry of Health's efforts are certainly not underestimated but a redoubling of efforts to match the time factor and losses to HIV and AIDS is necessary. Similarly, all health associations need to have a revisit to their programmes in order to have all hands on the deck. With success, Global partnership for development will no doubt be comfortably attracted for the mammoth task.

The Time from Initiation of a Stavudine Based Regimen to the Substitution of Tenofovir for Stavudine due to Lipodystrophy or Peripheral Neuropathy

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INTRODUCTION

Use of HAART has been associated with metabolic abnormalities including lipodystrophy and peripheral neuropathy especially among patients receiving thymidine analoguecontaining HAART. Previous studies have shown improvement in these symptoms following a switch from Stavudine to Tenofovir1. WHO reviewed ARVs guidelines for resource limited setting with inclusion of Tenofovir in the first line. The Ministry of Health and Social Welfare in April/May 2007 reviewed the National guidelines in the country taking a great step forward by including Tenofovir in its first line ARVs list. This was good news for patients who were faced with major side effects of Thymidine analogues especially Stavudine.

At Senkatana centre the clinical team decided to review data of patient switched from Stavudine to Tenofovir and looking with aim of exploring the predisposing factors to these side effects, if any. This cohort of patients can subsequently be followed up to look into their response to this regimen in terms of improvement of symptoms.

MATERIALS AND METHODS

This is an original research paper, a descriptive study undertaken during the period of

November 2007 and May 2008 at Senkatana Centre for adult HIV / AIDS treatment and care. The study population was made up of patients initiated on Stavudine based regimen during period of May 2004 and October 2007 and were managed by our team. Patients were evaluated clinically taking histories (subjective) and physical examination (objective). Clinical manifestations included painful feet, tingling sensation in the extremities, truncal enlargement, loss of limb fat and gynaecomastia in males. See picture at the appendix.

In April/May 2007, The Ministry of Health and Social Welfare reviewed the National the Guidelines with Tenofovir becoming part of first line therapy. Our Team decided to compile data from patients whose treatment was substituted from Stavudine to Tenofovir.

Inclusion criteria were all patients with moderate to severe lipodystrophy syndromes and peripheral neuropathy. These were side effects most frequently encountered in the centre.

Exclusion criteria included patients with renal impairment.

RESULTS AND OBSERVATIONS

184 patients were reviewed all of whom where initiated on thymidine analogue Stavudine. Patients' age ranged from 21 to 65 years with a mean of 42.47 years. 116(63.84%) were female while 68(36.16%) were male. Table 1 shows analysis of distribution:

Table 1					
Variable	Ν	Mean	SD	p25	p75
Age	184	42.47283	8.832956	36	48.5





Body mass index (BMI) at enrolment to ARVs is depicted in figure 2 and BMI at diagnosis of side effect condition is illustrated in figure 3. Table 2 showing BMI variability at initial evaluation of patients:

Table 2					
Variable	Obs	Mean	SD	Min	Max
Initial BMI	181	22.00773	4.14511	14.4	38.7

Table 3 showing BMI variability at diagnosis of Peripheral neuropathy or Lipodystrophy syndrome:





initial_bmi

14.4

Fig.2 shows Initial BMI at initiation on HAART.



Fig. 3 shows BMI at Diagnosis of Peripheral neuropathy or Lipodystrophy syndrome. It is noted that at initial evaluation of our patients BMI ranged from 14.4 to 38.7 with a mean of 22.01 while at the time of diagnosis of pe-

38.7

ripheral neuropathy BMI ranged from 15.6 to 36.9 and a mean of 23.67. This was due to response to ARV treatment. It is important to mention that the investigators decided to analyze the BMI without linking it to gender variation. This may explain the low mean.

Figures 4 and 5 show CD4 variation initially and at the time of substitution to tenofovir while tables 4 and 5 show analysis of these CD4 data.



Figure 4 Fig.4 shows CD4 distribution at first evaluation of patient.



Fig.5 shows CD4 distribution at the time of substitution from Stavudine to Tenofovir

Table 4 showing CD4 distribution as depicted in fig.4

Table 4						
Variable	Ν	mean	p50	sd	p25	p75
Initial CD4	176	183.2	152	140.52	71	275

Variable	Min	Max
Initial CD4	0	905

Table 5 showing CD4 distribution as depicted in fig.5

Table 5						
Variable	N	mean	p50	sd	p25	p75
CD4 AT DIA S	182	441.05	395	239.42	267	568

Variable	Min	Max
CD4 AT DIA S	13	1248

The CD4 counts ranged from 0 to 905 at initial evaluation of patients with a median of 152 rising to a range of 13 to 1248 and a median of 395.

Concerning the duration of patients on Stavudine based regimen before development of either peripheral neuropathy or lipodystrophy syndrome or other unclassified side effects which were not the focus of this study, it varied from as short as 3 months(12 weeks) to 48 months(192 weeks) as shown in table 6.

		Table 6		
DURA- TION (Months)	Frequency (%)	PERIPH- ERAL NEURO- PATHY (%)	LIPODYS- TROPHY (%)	OTHERS (%)
0-3	30 (16.3%)	29 (29%)	3 (4.1%)	4 (26.7%)
7-12	64 (34.8%)	45 (45%)	16 (21.9%)	3 (20%)
13-18	19 (10.3%)	7 (7%)	4 (5.5%)	2 (13.3%)
19-24	27 (14.7%)	11 (11%)	16 (21.9%)	3 (20%)
>25	44 (23.9%)	8 (8%)	34 (46.6%)	3 (20%)
Total	184 (100%)	100 (100%)	73 (100%)	15 (100%)

Table 6 shows time frame before development of each side effects.

We also looked into the relationship between development of peripheral neuropathy/ Lipodystrophy and Antituberculous drugs.

Of the 184 patients under review 88 (47.83%) had tuberculosis at one time or the other ranging from once to five times.

Table 7 shows correlation between TB treatment and side effects

Of these 88 patients 51.1% developed peripheral neuropathy while 39.8% had lipodystrophy.

DISCUSSION

The main pathogenetic mechanism through which nucleoside analogs are thought to contribute to the metabolic changes and organ toxicities is mitochondrial toxicity (Brinkman 1999) manifesting in patients as peripheral neuropathy and lipodystrophy syndrome2,3,4.

NRTIs are prodrugs (Kakuda 2000) because they require activation in the cell through phosphorylation before they are able to inhibit their target, e.g. HIV reverse transcriptase. In addition to impairing the HIV replication machinery, the NRTItriphosphates also inhibit a human polymerase called .gamma-polymerase., which is responsible for the replication of mitochondrial DNA (mtDNA) 5, 6.

The risk profile of developing mitochondrial toxicity is as shown below:

D4T + ddI > ddI >D4T >AZT > 3TC > ABC >TDF

We are all familiar with these drugs as we use them in most of our ART clinics. The initial national guidelines were Stavudine (D4T) based and this predisposed patients to peripheral neuropathy as depicted in this study. From this risk profile, it is very important to note that Zidovudine (AZT) is just next to the D-drugs followed by Lamivudine (3TC). Tenofovir has the least risk profile and this explained why most researchers support a substitution from D4T to Tenofovir.

Mitochondrial toxicity manifests in various ways depending on the target organs6. Peripheral neuropathy and lipodystrophy syndrome being just the tip of an iceberg6,7.

Table	7

Conditions	History of Antituber- culous treatment
Peripheral Neuropathy	45 (51.1%)
Lipodystrophy	35 (39.8%)
Both conditions	2 (2.3%)
Others	6 (6.8%)
Total	88 (100%)

See figure 8 below depicting a summary of mitochondrial manifestation.



CONCLUSION

Peripheral neuropathy secondary to Stavudine develops quite early in the course of treatment while lipodytrophy occurs at a later stage. There may be a correlation between development of peripheral neuropathy and previous exposure to antituberculous drugs. HIV/AIDS clinicians across the country must be glad with the inclusion of Tenofovir in the first line of treatment as this drug has been shown to reverse the symptoms. Further exploration of this cohort of patients is important. Picture 1 shows 25 years old man on with Gynaecomastia after 72 weeks of Stavudine based



Picture 1

Picture 2 shows 68 years old man with gynaecomastia following 48 weeks exposure to Stavudine based regimen.



Picture 2

REFERENCES

1. Moyle G, Fisher M, SWEET study group. A randomized comparison of continued zidovudine plus lamivudine BID (AZT / 3TC) vs switching to tenofovir DF plus emtricitabine (FTC / TDF) each plus efavirenz (EFV) in stable HIV infected persons: 48 week study—results of a planned 24 week analysis. Program and abstracts of the 4th International AIDS Society Conference on HIV Pathogenesis, Treatment and Prevention; July 22-25, 2007; Sydney, Australia. Abstract WEPEB028.

2. Galant JE, DeJesus E, Arribas JR, et al. Tenofovir DF, emtricitabine, and efavirenz vs. zidovudine, lamivudine, and efavirenz for HIV. N Engl J Med. 2006;354:251-260.

3. Arnaudo E, Dalakas M, Shanske S, Moraes CT, DiMauro S, Schon EA. Depletion of muscle mitochondrial DNA in AIDS patients with zidovudine-induced myopathy. Lancet 1991;337:508-510. http://amedeo.com/lit.php?id=1671889. Accessed June 5 2008.

4. Blanche S, Tardieu M, Rustin P et al. Persistent mitochondrial dysfunction and perinatal exposure to antiretroviral nucleoside analogues. Lancet 1999;354:1084-1089. http://amedeo.com/lit.php?id=10509500. Accessed June 5 2008.

5. Bonora S, Boffito M, D'Avolio A et al. Detection of stavudine concentrations in plasma of HIV-infected patients taking zido-vudine. AIDS 2004;18:577-578.

http://amedeo.com/lit.php?id=15090817. Accessed June 5 2008.

6. Brinkman K, Smeitink JA, Romijn JA, Reiss P. Mitochondrial toxicity induced by nucleoside-analogue reverse-transcriptase inhibitors is a key factor in the pathogenesis of antiretroviral-therapy-related lipodystrophy. Lancet 1999; 354:1112-1115. http://amedeo.com/lit.php?id=10509516. Accessed June 6 2008.

7. Brinkman K, Vrouenraets S, Kauffman R, Weigel H, Frissen J. Treatment of nucleoside reverse transcriptase inhibitor-induced lactic acidosis. AIDS 2000; 14:2801-2802.

http://amedeo.com/lit.php?id=11125906. Accessed June 6 2008.

Sixty -Five Year Old Man with Multiple Mutations to ARVS

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INTRODUCTION

Mr LM is a 65 a year old man who was diagnosed and initiated on highly active antiretroviral therapy (HAART) at Leribe hospital in April 2005 with Stavudine-40, Lamivudine and Nevirapine. He subsequently developed Peripheral neuropathy and his treatment regimen was reviewed with Stavudine changed to Zidovudine. He was transferred to the referral hospital Queen Elizabeth II in March 2006 where he was being managed until April 2007 when they noticed a drop in CD4 (see Table 1 below). His viral load in October 2007 was found to be 87,021cps/ml (Log4.94).

A diagnosis of immunological and virological failure was made and patient transferred to Senkatana Centre for further management.

Initial clinical evaluation at Senkatana showed an elderly man, wasted, markedly pale. Neurological review: hyperaesthesia of both lower extremities. A diagnosis of Virological treatment failure with possible accumulation of Thymidine analogues Mutation was made. Basic laboratory investigations + viral load and resistance testing were done.

Laboratory investigations results: see table 2.

Table 1 Shows CD4 results of MR LM

Table 2 shows Lab investigations carried at Senkatana

Table 1

Date	CD4 Results
April 2005	12
December 2005	34
April 2006	104
October 2006	110
April 2007	92
July 2007	32
January 2008	27
May 2008	192

Tal	hle	2
1 a	ble	- 2

Date	Investigations	Results	Remarks
07/1/2008	CD4	27	
	Cr	90	
	Urea	3.8	
	ALT	57	Mild eleva- tion
	Viral Load	72,060cp/ml HIV subtype C.	Resistance result see fig.1
	Hb	5.4g/dl	Patient started on Haematin- ics
	PLT	194	
	WBC	3,000cells/ml	
17/1/2008	Cholesterol	5.4	
	Triglycerides	5.7	
	HDL	-	
	CXR and Sputum	Normal study	
28/5/2008	Hb	12g/dl	
	PLT	446	
	WBC	9,500/ml	
	CD4	192	
	ALT	17	
	AST	11	
	Cr	82	

DISCUSSION

This is typical patient treatment in a resource limited setting where patients usually present very late with advanced immunological suppression. This might have explained his initial poor immunological recovery coupled with his age. However, it is important to note that once there is a decline in CD4 count, such patient should be investigated for opportunistic infections and if none are found, treatment failure is your diagnosis.

Zidovudine is a very robust molecule in the nucleoside analogue backbone which needs multiple mutations before resistance can occur. This patient developed Thymidine analogue Mutations D67N, K70R, K219E and T215F hereby rendering Stavudine and Zidovudine ineffective.

In addition, patient accumulated M184 and L74I. The former confers complete resistance to Lamivudine and Emtricitabine while both confer resistance to Abacavir and Didanosine. He also had K103N which confers resistance to Nonnucleoside analogues Nevirapine and Efavirenz.

In a setting like ours where we have very limited options, it becomes very difficult to treat this kind of patient.

Note that when he was evaluated initially at Senkatana, he was started on Abacavir, Didanosine and Lopinavir/Ritonavir (Alluvia) based on National Guidelines because the result of the resistance test was not available.

This option although not optimal can be used because the patient did not accumulate K65R which confers total resistance to ABC and Tenofovir. It must be stated that if the result of Resistance were available before switching, a better option would have been Tenofovir+ Lamivudine +Alluvia. Why Lamivudine? M184V mutation is a positive mutation that cripples the HIV virus thereby making it more susceptible. Tenofovir is still fully active because patient did not accumulate K65R. In settings where there are many options available, drugs such as Etravarine, Darunavir or Maraviroc in combination with Protease inhibitors are adequate options.

CONCLUSION

Patients who have been exposed to Stavudine and/or subsequently exposed to Zidovudine and then develop treatment failure are most likely to have accumulated TAMs. The choice of 2nd line regimen should be done very carefully if possible after consultation with more experienced colleagues.

In addition the timing of switching patient to 2nd line should be well defined because the longer patients are left on a failing regimen the higher their chances of accumulating mutations. The best time is at a point of virological escape. Finally, anticipatory measures for highly treatment experienced patients should be developed from now. Expert's advice is that, for patients who have no therapeutic options locally, clinicians should liaise with colleagues in the Western World so that such patients can be enrolled into various clinical trials.

REFERENCES

1-Lederber B, Egger M, Opravil M, et al. Clinical progression and virological failure on HAART in HIV-1 patients: a prospective cohort study. Lancet 1999, 353: 863-868.

2-Grabar S, Le Moing V, Goujard C, et al. Clinical outcome of patients with HIV-1 infection according to immunologic and virologic response after 6 months of HAART. Ann Intern Med

2000 ,133:401-10 http://amedeo.com/lit.?id=10975957

3-Florence E, Lundgren J, Dreezen C, et al. Factors associated with a reduced CD4 lymphocyte count response to HAART despite full viral suppression in the EuroSAIDA study. HIV Med 2003;4:255-62

http://amedeo.com/lit.php?id=12859325

4-Deeks SG. Determinants of virological response to antiretroviral therapy: implications for long term strategies. Clin infect Dis 2000, 30 suppl 2: S177-84.

http://amedeo.com/lit.php?id=10860903

5-Greub G, Cozzi-Lepri A, Ledergerber B et al. Intermittent and sustained low-level HIV rebound in patient receiving potent antiretroviral therapy. AIDS 2002, 16:1967-9

6- Phillips AN,Staszewski S, Weber R, et al. HIV viral load response to ART according to the baseline CD4 cell count and viral load. JAMA 2001, 286:2560-7. http://amedeo.com/lit.php?id11722270.

7-Fleischer R, Boxwell D, Sherman KE. Nucleoside analogues and mitochondrial toxicity. Clin Infect Dis 2004; 38:e79-80.http://amedeo.com/lit.php?id=15095 236

8-Highleyman L. Adverse Effects Associated with Antiretroviral Therapy. BETA 2000. <u>http://hiv.net/link.php?id=18http://www.aeg</u> <u>s.com/pubs/catie/</u>

9-Ackah AN, Coulibaly D, Digbeu H, et al. Response to treatment, mortality, and CD4 lymphocyte counts in HIV-infected persons with tuberculosis in Abidjan, Cote d'Ivoire. Lancet 1995; 345: 607-10. http://amedeo.com/lit.php?id=7898177. Accessed June 6 2008.

10-Andries K, Azijn H, Thielemans T, et al. TMC125, a novel next-generation nonnucleoside reverse transcriptase inhibitor active against nonnucleoside reverse transcriptase inhibitor-resistant human immunodeficiency virus type 1. Antimicrob Agents Chemother. 2004;48:4680-4686.

11-Katlama C, Berger D, Bellos N, et al. Efficacy of TMC114/r in 3-class experienced patients with limited treatment options: 24-week planned interim analysis of two 96-week multinational dose finding trials. Program and abstracts of the 12th Conference on Retroviruses and Opportunistic Infections; February 22-25, 2005; Boston, Massachusetts. Abstract 164LB.

12-Katlama C, Carvalho MTM, Cooper D, et al. TMC114/r outperforms investigator-selected PI(s) in 3-class-experienced patients: week 24 primary efficacy analysis of POWER 1 (TMC114-C213). Program and abstracts of the 3rd IAS Conference on HIV Pathogenesis and Treatment; July 24-27, 2005; Rio de Janeiro, Brazil. Abstract WeOaLB0102.

ART (TRAUMATIC RESTORATIVE TREATMENT) IN THE FIELD OF ORAL HEALTH

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INTRODUCTION

Lesotho has reached a turning point for oral health. The past 10 years of hard work and perseverance have began to bear fruits towards offering appropriate oral health services to all those who live in this Mountain Kingdom. oral health awareness week which has the key recommendations of the 1st Oral Health Conference, held in 1999, has become an important annual program in Lesotho. However, access to oral health services provided by appropriate oral health staff using cost effective relevant models have become increasingly evident in the context of the "Triple crisis of HIV/AIDS, poverty, and food scarcity" that this country is faced with. The oral health division is committed to a multi-sectoral approach to actively seek to address the needs of those who are at greatest risk of poor oral health. Presently, oral health is recognized as an important part of general good health with a cost centre and a director to spearhead the oral health services. Links between oral health services and the other health care services ensure that oral health is promoted, improved, maintained and where necessary, restored at the earliest opportunity.

The future can be very different and exciting because the oral health sector has a vision which is better oral health for all, for life.

Good Oral Health for all, for life, starts with promoting oral health for the youngest and

most vulnerable members of our society. Ensuring that oral health services are accessible and responsive to the needs of children and other vulnerable members is the first step in accomplishing that objective. The most common treatment in less developed countries is extraction of decayed teeth. This is applicable to children too, who in turn begin to develop negative attitude to oral treatment, which extends to their adult life. In this context ART becomes a good vehicle to reverse that thinking pattern, starting with children.

WHAT IS ART?

The ART technique is a procedure based on excavating carious cavities in teeth using hand instruments only and restoring them with and adhesive filling material called glass ionomer. This procedure has been developed because millions of people in less developed countries, in special groups like refugees, and people living in deprived communities are often unable to access dental care. Their teeth generally decay until removal is required. The absence of electricity and the traditional perception that restorative dental care automatically requires electrically driven equipment under all circumstances are the most profound reasons underlying this mindset. In contrast, the ART technique enables treatment of cavities in teeth of people residing in the area, which do not have electricity or expensive dental equipment.

ART technique provides the oral health worker with a tool that supports oral health education message. It is important that the preventive activities should go hand in hand with curative activities. This technique also offers people with treatment of decayed teeth at an early stage, which is non-threatening and is provided at a low cost.

Oral care workers can now carry all the necessary equipment (hand instruments) for providing oral care in a handbag and they can travel by form of transport to each the needy communities. In addition they will be able to educate people on good and bad oral health habits and behavior. Overall, this procedure will contribute to job satisfaction for many oral health workers who are simply described as "pullers of teeth".

Glass ionomers are very effective dental restorative materials. In applying in the very early stages of caries development, the progression of carious lesions may be stopped or reduced mainly through the slow release of fluoride and the adhesive properties of the restorative material. The ART technique should be considered as part of oral health care based on a preventive/promotive health philosophy.

INDICATIONS FOR ART

• Single surface cavities

These cavities occur in one surface of a tooth: e.g.:

In pits and fissures on occlusal surfaces of pre molars and molars.

In pits and lingual surface of upper incisors.

In buccal and lingual grooves of pre molars and molars.

In proximal surfaces of anterior teeth.

• Multi- surface cavities

These cavities occur on two or more surfaces of a tooth. E.g:

In the occliusal surfaces and proximal surfaces of pre molars and molars.

In the occliusal surfaces and buccal or lingual surfaces of pre molars and molars. I incisive edges and proximal surfaces of anterior teeth.

CONCLUSION

ART is suited in the field-for instance in schools, village halls or health centers with minimum or no dental equipment or resources. All one needs are a flat surface for the patient, a stool for the operator and the necessary instruments and materials for ART, which can be easily carried in a small bag.

ART is a perfect alternative treatment approach for dental caries in resource limited settings base on Alma Ata, PHC principles, where quite often teeth are left to decay to such an extent that they are eventually extracted.

Let us attempt to change this scenario in Lesotho.

Getting to Know Your Client in Lesotho

'MUSI MOKETE, MBCHB

INTRODUCTION

It is not only knowing the name of your client that is important for the health professional, but also understanding the culture of the client is essential for the good delivery of services. Culture being a way of living, past and present, becomes very helpful especially with its dynamic nature and changes. The crossroads, dilemmas and contradictions in modern medicine and traditional medicine often boggle the service provider. Some examples:

PRIMIGRAVIDA

In Sesotho culture a young woman falling pregnant is a precious object well looked after even with scarce resources. Young children are not allowed to play around a pregnant young woman, strictly because they may trip unpredictably near the gravid lady and cause disaster- a cautionary preventive alertness.

By the seventh month of her first pregnancy the young lady has to go back to her home for the delivery. The reason is that she should be attended to by midwives (her mother and other women) in the village in a more conducive psychosocial atmosphere of people who have brought her up, and hence know her weaknesses and strengths, in order to have a successful delivery without pressures and high expectations from her in-laws. By this time of returning home, maximum cooperation is expected from both families. However the health professional (a young doctor, midwife e.t.c) may find that delivery of the first child has to be done in the hospital for many

medical reasons including pelvic disproportion of the young mother vis-à-vis, the expected new born who may be too big and require the mother to be delivered by caesarean section. More often than not the advice of modern medicine is flouted with disappointing consequences in the long run of vesico-vaginal fistula or dead fetuses.

To obviate the above problem the best is to get both parties together (in-laws and parents) and get an informed consent and cooperation by reminding them that in cases of disasters (snow, floods etc) the baby is delivered at the in-law's place or hospital and later taken to the mother's home for the necessary rituals without causing any harm, but rather gaining a healthy mother and live-born baby.

THE BABY IS BORN

Two reeds are stuck to the eaves of the roof, each representing a month of confinement as well as a bar (no go area) for strangers and men. This is often not explained, but rationally defensible and plausible. First, this confinement protects the new born from getting bugs (germs) from strangers which are unknown and can not be easily contained by the immediate family members. Secondly, the psychosocial comfort of the mother is maintained whilst she is being trained in the art of bringing up a baby. Thirdly and physiologically the mother can take care of the lochia comfortably and during the second month of confinement when the first reed, sentinel, is removed she can move around and thus encourage involution of the uterus so that after confinement she can face the world actively without any inconveniences of the lochia, aches and all. In the humdrum of the modern world working women are required to go back to work after three, four or six weeks after confinement when in fact physiologically they are not ready let alone for bonding with the baby.- unfair labour laws. Other countries in the first world allow for more leave, including maternity leave.

CARING FOR THE BABY

Within the first 21 days, post delivery the baby may have yellowish discharge from the eyes (usually chlamydial or bacterial) a sign of ophthalmia neonatorum. This needs treatment actively with broad spectrum antibiotics but where there is no doctor or midwife (modern), some elderly midwives resort to mother's milk being dropped into the eyelid fornices. In actual fact the "old ladies" wisdom is correct because colostrum has an enzyme called lysozyme in abundance which is bactericidal. However the best is still to persuade the young mother to bring the new arrival for medical attention.

The baby will normally be breastfed for two years or more and the father is banned from sexual contact with the mother. Sometimes the two love birds may skip the ban and the young mother may fall pregnant. Should that happen the young lady is stopped from breast feeding, the argument being that the baby will fall sick. The health worker should however encourage continuity of breast feeding with proper counseling about its value for the child and the mother plus supplements as the milk supply drops to a lower level in time.

When the baby has high fever, a traditional practitioner or an elder in the family is consulted before going to see the doctor. On arrival at the clinic the chest has already been scarified in the left believing that the tachycardia will stop without understanding that pneumonia or otitis, tonsillitis may be the problem. Of course there is always a chance of introducing HIV with old unsterilised blade let alone its value which must be discouraged and stopped, with adequate counseling. A baby with gastro enteritis, apart from the usual depressed fontanelle, sunken eyes, and fever, will also be scarified on the abdomen or forehead on presentation at the clinic in the rural areas or even urban areas sometimes. Antidiarrhoeal mixtures is the answer if the i.v. treatment is not indicated for severe cases plus counseling.

PSEUDOCYESIS CASES

Basotho know that pseudocyesis exists hence the Sesotho word "seema" which means something in place of real thing. Unexplained to them is the cause, hence a lot of superstition beliefs are attached to the explanation causing a lot of stress for the young mother, in-laws and parents sometimes resulting in separation or divorce. Counseling both parties, parents and in-laws, and including the victim is advisable and often has good results with patience exercise.

BEREAVED MOTHER

Seen at the clinic in a queue, a bereaved mother must always be advanced to the front in order to be seen first because it is mandatory per custom to reach her home before sunset. Basotho believe that the bereaved, wearing black clothes may be a harbinger of death if she stays over night away from home. Psychologically the bereaved is in a state of retreat and must be given space. Secondly, people who attend to her, pity her and make her feel embarrassed hence the sooner she is given the priority attention the better, otherwise a very ill patient may be lost.

HERPES ZOSTER INFECTION

Whether the herpes zoster inflammation is on the body or around the eye, forehead and scalp which is described by quacks now as a new phenomenon called "lebanta" belt, old Basotho know that shingles, which is the herpes zoster affliction, known as blisters in lay man's terms. These eruptions dry up and cause a painful and debilitating condition. Hence, patientsare advised that they should go to the maternal uncle's place where ash would be used to dry the blisters and the softer and sympathetic treatment (no work, good food) would be given. There can be many reasons for reduced immunity: HIV, TB, lymphoma, etc. and care has to be taken to give appropriate counseling and persuasion for further investigation for establishing the cause of the lowered immunity. Proper symptomatic treatment will of course be given concurrently: Acyclovir tabs and ointment or calamine lotion as well as suitable analgesics.

TRADITIONAL HEALING

Herbal remedies are many and varied. Some through many years experience and experiment are quite effective. The problem is the amounts given and the untested (scientifically) potency hence whilst many Basotho will get along with traditional treatment the open question of side effects remains outstanding.

Psychological treatment and counseling also has a place and there are many Basotho who through their experience of many years become helpful. Like everywhere else in the world quacks are on the increase duping the often ignorant person for money.

ANNOUNCEMENTS

Lesotho Medical Association Annual General Meeting will be on 19th & 20th of July 2008. All stakeholders are invited for the open sessions.

A Rendezvous with medical students studying in South African Universities has been arranged by Lesotho Boston Health Alliance for the 25th June and July 10th 2008 at Lehakoe Conference Hall. All stakeholders are invited for the brief.

Lesotho Medical, Dental and Pharmaceutical Council will host all African Medical Councils (AMCOA) on 30th of September to the 3rd of October 2008.

IAMRA- International Association of the Medical Regulatory Authorities – An association of the Medical Councils of the world – will meet in Cape Town on the 6th to the 9th October 2008. The first summer school workshops on HIV / AIDS will be held in Germany in August 2008 with participants from Lesotho, (Lesotho Medical Association) Stellenbosch University and the hosts (Germany). The next sessions will be held in Lesotho in December 2008 and Stellenbosch in March 2009.



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