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Guest Editorial

Research ethics committees are crucial for health research

Good health is crucial for the productivity of a society, and so health research has to be conducted perpetually since new diseases are constantly emerging each year. The response to Ebola and Zika involved rapid research to design effective vaccines, and research into chronic diseases like hypertension and diabetes continue with the search for more effective treatments. Such research however depends heavily on human volunteers, without whom new discoveries would not be possible. Consequently, research programmes worldwide are constantly seeking to recruit persons who in turn must have confidence in the research process and the safety of its mechanisms.

The Nazi experiments

Ever since the notorious research on unconsenting prisoners of war in concentration camps resulted in the Nuremberg trials and the consequent mandated requirement of informed consent, research with human participants has depended heavily on research ethics committees (RECs/IRBs) to protect the participants in research and ensure the integrity of the research process. The importance of the work by such committees cannot be over-emphasized, as they have been invaluable to the maintenance of public trust in the conduct of research. Without trust in the process, persons would not participate in research, and so researchers worldwide depend on the work of RECs/IRBs to reassure the public regarding the standard of their proposed work, as well as the ongoing oversight during the research process. As a consequence of this, when persons are approached regarding their participation in research, it is incumbent on them to inquire firstly whether the proposed research has been fully evaluated and approved by a competent research ethics committee. Research ethics committees exist at some academic institutions such as the University of the West Indies and the University of Technology, with a central committee being found at the Ministry of Health in Kingston. The Ministry of National Security also has a research ethics committee to protect the welfare of prisoners who may be enrolled in research that could benefit them and their health.

The mandate of research ethics committees

A competent REC/IRB will consist of an experienced chairperson and members of varying background expertise to cover the various subject areas of possible research being submitted to the committee for evaluation and possible approval. The committee will also comprise at least one person representing the lay public, a member with legal training, and a member with training in research ethics. These committees should function at the highest international standards, meeting the requirements established by the World Health Organization (International Ethical Guidelines by the Council for International Organizations of Medical Sciences), the World Medical Association's Declaration of Helsinki, the Belmont Report in the USA, or the standards established by the Tri-Council Policy Statement in Canada. It is these committees that will provide reassurance to the general public that their interests during the research process will be protected, as researchers focus on the scientific research design and reliable outcomes to their research endeavours. Members of the lay public should therefore educate themselves regarding the importance of research, as well as the steps that must be followed in order for researchers to engage them in their research projects.

Enrolment in research

On being approached to become a participant in research, whether for a 'survey' in any public space or in hospital, persons should be told that they are being invited to participate in research, and that they have the right not to participate. Persons should be aware that a simple 'survey' may actually be research that may involve simple anonymous questionnaires, or a more complex involvement such as measurements and the collection of data and body fluids. Persons should be told the 'purpose' of the research, any and all foreseeable risks, and whether they might benefit personally or if any potential benefit might accrue to other persons or to generalizable knowledge for the society. They should be given details on how their particular information will be stored (confidentiality), and how they will be informed about the outcome of the research. They should also be given time to consider their participation, and to consult with others if they so wish.

What we should know

Members of the public should be reassured that they may withdraw from the research project at any time without any loss of the normal health care benefits to which they are entitled, and that they may ask any additional questions or seek advice or reassurance from a person whose contact details will be supplied and who is independent of the research (e.g. the chair of a research ethics committee).

Persons will be required to sign an informed consent document only after all the above-mentioned details have been explained to them at a level for their full understanding, and after they have agreed to participate in the research. They should obtain a copy of the informed consent document and be able to refer to it periodically. Please pass on all these points to your friends, relatives, and associates, as we all need to be educated about the importance of health research and research ethics committees, and what should occur when we are invited to participate in the process.

Derrick Aarons MD, PhD is a consultant bioethicist/family physician, a specialist in ethical issues in medicine, the life sciences and research, and is the Ethicist at the Caribbean Public Health Agency – CARPHA. (The views expressed here are not written on behalf of CARPHA)

Letter to the Editor

We have read with deep appreciation the comments by Dr Leonard Bernstein in the guest editorial entitled “Changing the Physician Mindset” published in Volume 78 Issue 1 of the Caribbean Medical Journal. This is undoubtedly a growing global issue that profoundly affects the healthcare professional and we therefore support his call for an open and honest discussion of this topic within the fraternity. Please allow us to share our thoughts on this matter from a bio-ethical perspective.

Religious views may often conflict with well-accepted practices in healthcare; this is poignantly evident in cases related to end-of-life decisions [1]. Physician-assisted death (PAD) is one of the most debated issues in bioethical as well as ecclesiastical circles. It is therefore remarkable when a religious and social activist, such as Archbishop Desmond Tutu of South Africa, publicly announced on his 85th birthday that he supported the option of physician-assisted death [2]. Although the terms euthanasia and assisted suicide may be slightly different, they are being interchangeably used to describe the mode of ending a life without prolongation of the process of dying with an ultimate goal of preventing suffering [3]. Herein exists a conflict of a healthcare professional's ethos who is morally bound with the responsibility to preserve human life on the one hand and the ethical requirement of preventing human suffering on the other [4]. The core debate surrounds the ethical as well as the legal perspectives of physician assisted suicide, with the understanding that not all legal perspectives may be ethical and vice versa.

Firstly, in modern medicine, patients are enabled to make decisions regarding their interventions, according to the ethical principle known as autonomy [5]. Research into empirical relationships between autonomy and quality of life outcomes after healthcare interventions have clearly demonstrated significant improvements in patient satisfaction and mental health, when patients were well informed and made personal choices about their healthcare [6]. Assisted death for a patient with a terminal illness should also be considered as a medical option chosen by the patients or surrogates by the principle of ‘autonomy’. This intervention, when explained in detail to the patient and relatives, and chosen by them by their own will, has the potential to improve their overall satisfaction. This may conform to the ethical theory of Buber, where the so-called “I-THOU” relationship is established, wherein physician exhibits ‘caring and compassion’ for the patient and relatives.

Secondly, legalization of assisted death may potentially address the second ‘pillar’ of medical ethics - ‘justice’. A statute will facilitate clear formulation of guidelines and regulations, which can be implemented when a decision is made to pursue this option for a given patient. It has been well documented that terminally ill patients are more likely to commit suicide because of frustration, depression and guilt [7]. In the absence of an assisted mode, patients have chosen to shoot or hang or poison themselves, which may augment their intense suffering before death [8]. Hence it may be argued that legalization of assisted-death to patients with terminal diseases can potentially decrease

the likelihood of self-inflicted suffering and also provide safe means to end their misery. The ethical theory of Mill espouses the concept that the ‘numbers’ benefiting from an intervention must be greater than the situation of not having the intervention. Legalization of PAD may well conform to this theory, since more and more patients with terminal illnesses can chose this option and physicians may not have the hesitation to undertake this intervention.

The third pillar of medical ethics is ‘beneficence’. Implementation of PAD should address ‘beneficence’ by preventing patients and relatives undergo immense pain and suffering before the inevitable happens. Terminally ill patients are at risk of developing many psychological derangements including depression, anxiety and delirium, which negatively impact both on them and their family [9]. Transferring the task of caring for the terminally ill patients to non-medical persons including relatives has been shown to cause both physical and psychological burnout [10]. By legalizing assisted-death, these patients can be provided with an opportunity of dignified passing that would remove the burden from relatives in dealing with such a difficult situation. Kantian ethical theory considers the ‘absolute value’ of a person to be important.

Opponents of physicians-assisted death argue that legalization of this intervention may make this an easily available medical option, which may be abused by other patients who may not be terminally ill in the real sense. This is however not supported by statistics. In the state of Oregon in USA, assisted death was legalized in 1997. In 2015, this mode of death accounted for only 38.6 per 10,000 deaths; additionally patients who chose this option were required to undergo rigorous assessment and approvals before the procedure was allowed [11]. Furthermore, preventing access to this option due to the fear of abuse may be contrary to Buber's theory of ethics, reducing the physician-patient relationship to “I-IT”, where patients are seen as a ‘case with disease’, not a suffering human.

Dissident opinion also consider PAD to be violating the ‘sanctity of life’ as ascribed by religious bodies. If one considers the 2.7 million animals that are euthanized every year in the USA alone by charitable organizations on so-called ‘humanitarian grounds’ [12] and the 56 billion that are farmed exclusively for food [13], the morality associated with the concept of ‘sanctity of life’ is highly questionable. Sanctity of life cannot be only for humans, and certainly the suffering of animals is a more compelling moral issue, both in numerical and philosophical terms. It is an unjust action with an anthropocentric perspective as if only human life is sacrosanct, while animal life can be sacrificed.

Finally, there is also a misconception of the opponents of PAD, likening it to ‘torture’ of patients, with an unsubstantiated claim that they are being starved and dehydrated until death. The prototype legislation in Oregon that has been used as a model for other regions, specifies the type of institution, counselling requirements, the grade of physician and the characteristic of the patient that qualifies for PAD [14]. PAD option is available only to the terminally ill patient with no chance of any recovery. PAD

(and its legal access) is thus a paradigm based on well-researched and scientific principles; the view that it is akin to 'torture' is quite illogical. Thus, preventing access to this dignified medical option for patients who are really suffering, would remove goodwill and empathy from patient care. (Again, I did not want to bring back Kant here, which we already mentioned previously) In summary, healthcare professionals are constantly faced with a challenging dilemma of deciding between the apparently conflicting needs to preserve human life and prevent suffering. While it is well understood that it is an extremely difficult decision to make, ultimately it is the decision that should rest with the patients, their relatives and the healthcare teams, who must engage in discussions in an honourable manner within the legal framework. We also understand that our viewpoint may not be exhaustive to cover every aspect of PAD, we sincerely hope that this may add material to the local discussion on this matter.

*Professor Hariharan Seetharaman MD PhD FCCM1
Associate Professor Satesh Bidaisee DVM EdD FRSPH2
Dr Darren Dookeeram MBBS DM FRSPH2
Dr Kareema Ali BSc MD MRCP3*

1. University of the West Indies, St Augustine, Trinidad and Tobago.
2. St George's University, True Blue, Grenada.
3. Sangre Grande Hospital, Sangre Grande, Trinidad and Tobago.

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Original Scientific Article

Cervical Total Disc Replacement in Trinidad and Tobago: Presentation of Cases and Review

R. Fernandez Melo¹, C. Calderon² & A. Sattaur²

¹ Consultant Neurosurgeon, Department of Surgery, Eric Williams Medical Science Complex, NCRHA, Trinidad & Tobago

² House Officer, Department of Surgery, Eric Williams Medical Science Complex, NCRHA, Trinidad & Tobago

Abstract

Object: To review the use of cervical total disc replacement in a tertiary setting, in the Anglophone Caribbean; the premier report from Trinidad and Tobago.

Method: Case data was obtained for two eligible patients who had cervical total disc replacement during the period of July 2013 to February 2014, in a tertiary, public hospital. These patients were followed up prospectively, with various clinical visits and interval radiographic imaging.

Results: Two patients underwent cervical total disc replacement, at the levels of C5/C6 and C6/C7. These patients suffered with single level degenerative disease of the cervical spine, which failed to improve with conservative measures. They both underwent standard procedure technique for the implantation of the discocerv TM prosthetic device, with no morbidity or mortality observed post operation. Clinical visits proceeded, with radiologic scans immediately post operation, and approximately 2 years post- operation, showing adequate placement of the prosthetic device; and was devoid of any evidence of adjacent segment disease.

Conclusion: Cervical total disc replacement has shown to be an applicable, safe and affordable approach to single level degenerative disease; and is comparable to its predecessor, the anterior cervical decompression and fusion.

Keywords: Cervical total disc replacement (TDR), degenerative disease, Caribbean

Introduction:

Cervical disc disease is a common ailment, with one study, showing an incidence of approximately average 83 per 100,000. There are many aetiologies but degenerative disc disease and trauma are the two leading causes [1]. An artificial disc is a prosthetic device utilised to replace a natural spinal disc in cases of spinal disc relapse causing pain and paraesthesia. It is designed in such a way that it preserves mobility and sustains height in the affected spinal segment [2]. In the cervical spine, most movement occurs at the level of C5/ C6 and C6/C7. Disruption of this may lead to changes affecting adjacent vertebral segments, which may lead to long term pain sequelae and possible need for reoperation.

In recent years, cervical total disc replacement (TDR) has become popular as an alternative to anterior cervical discectomy and fusion (ACDF), which has been the gold standard for cervical degenerative disease, leading to spinal stabilisation and symptomatic relief [3]. However, due to the mechanical effects involved, cases of pseudo-

arthrosis and junctional degenerative changes have been noted [4,5,6,7]. It has been reported that the incidence of adjacent segment disease, may affect as many as 3-8% of patients annually; with this value increasing with each successive year [8]

With the advent of the total disc replacement (TDR) techniques showing comparative success in symptomatic relief, while maintaining mobilisation at the cervical segment, it is a definite alternative to decompression and fusion, where conservative management has failed [9]. This is the first report of a cervical TDR in Trinidad and Tobago, we present our case selection, results and outcome in two (2) case reports.

Presentation of Cases:

Between July 2013 to February 2014, 2 patients with single-level degenerative cervical spine diseases underwent cervical TDR by a single surgeon (R.F.M.) using a Discocerv TM (Alphatec Spine, Carlsbad, California, USA), a ceramic- on-ceramic ball and socket joint with titanium endplates, launched in 2009 (Figure 1).

Case #1:



Figure 1: Discocerv TM (Alphatec Spine, Carlsbad, California, USA), a ceramic- on-ceramic ball and socket joint with titanium endplates

A 48 year old, east-Indian male, with a history of type 2 diabetes mellitus, hypertension and ischemic heart disease (ejection fraction- 60%) presented to the outpatient clinic with a chronic history of cervical pain. The pain was characterised as being more severe on the right side with associated radiation of down the right arm, and accompanying paraesthesia.

On examination, he was found to have altered sensation of the right upper limb in the distribution of C6 and C7, with decrease power in the right hand. Magnetic resonance imaging revealed a herniated disc at the level of C6/C7 (Figure 2).

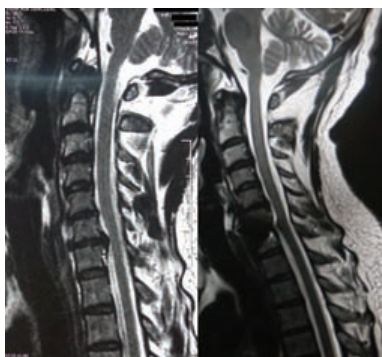


Figure 2: Case #1 MRI Pre Op (left) and Post Op (Right)
Case #2:

A 31 year old, east-indian female presented with a six (6) month history of progressively worsening neck pain with radiation to the right arm. This was associated with concomitant right upper limb weakness and mild functional disability. On examination, this was a clinically fit patient, with altered sensation in the affected limb, being more pronounced in the distribution of C5/C6. Magnetic resonance imaging revealed a kyphosis and severe disc herniation at the level of C5/C6 (Figure 3)



Figure 3: Case #2 MRI Pre Op (left) and Post Op (Right)
Operation:

Both cases successfully underwent a total disc replacement, in keeping with the established specific instructions for the Discocerv prosthetic device. After standard anterior discectomy of the affected cervical disc and decompression of the osteophytes under microscopic visualization, a trial implant was utilised; to provide the best size fit for the intervertebral space created. Artificial disc replacement dimensions being 17mm x 13mm x 6.75mm and 17 mm x 13mm x 5.25mm for case 1 and case 2, respectively. The endplate preparation procedure proceeded without the use of a high speed drill. After insertion of prosthesis, gentle tapping was applied until the desired position was achieved. (Figure 4).

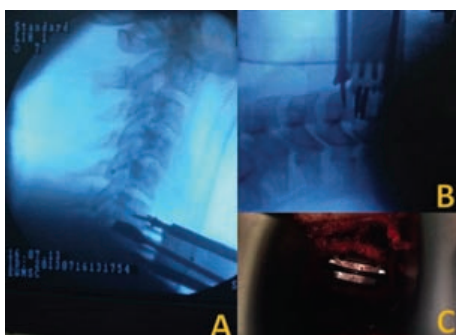


Figure 4A and 4B – Intra Op X – Rays showing positioning of prosthesis.

4C – Final position of prosthesis

Lateral fluoroscopy was employed several times to ascertain appropriate positioning of device and reasonable tightness. Both patients recovered from general anaesthesia without any neurological deficits.

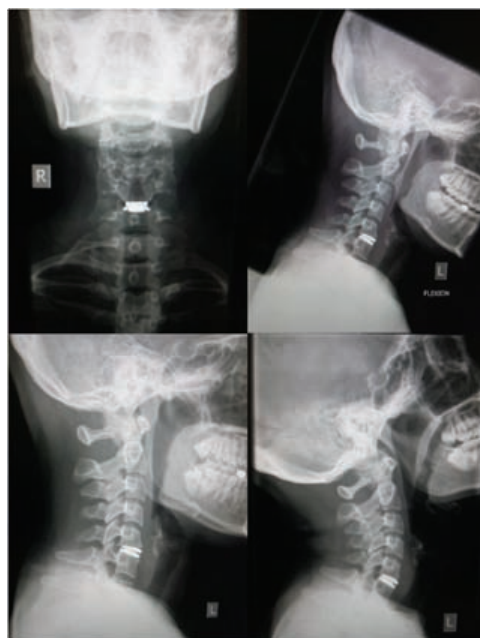


Figure 5: X-ray of Case #1 at 2 year follow up showing lack of heterotopic ossification (HO) and spontaneous fusion, at the level of the treated segment

Follow-Up:

During the post-operative period, both patients continued to improve daily- in terms of surgical site discomfort, and incurred no subsequent morbidity. Post-operative imaging displayed adequate placement of discs and no segmental instability (Figures 2 and 3). The management continued in the neurosurgery outpatient clinic upon discharge from in hospital care, and repeat magnetic resonance imaging approximately, two (2) years post operation displayed minimal change from prior radiologic imaging in both cases. Currently, both patients have preserved cervical segment mobility and are doing clinically well.

Discussion:

Currently, there are many commercially available artificial discs with different biomechanical properties. Artificial discs have been in development since the 1960s when Fernstrom replaced discs with ball bearing like devices that preserved motion at the joint. In the early 90's the first modern disc was developed and implanted by Cummins, which was later modified to give us the models currently in use today, such as the Discocerv TM system used in our patients [10].

Indications and Contraindications

Indications for cervical disc replacement include disc degeneration without instability in the cervical spine. Causes of this disc degeneration are most likely related to degenerative disc disease or a herniated disc. There may be myelopathy associated with a spondylotic stenosis of the foramen or canal as well as root disease. This root disease is associated with a neurological deficiency that

does not respond to conservative management. Conservative treatment entails physiotherapy, medication for pain relief and neck bracing for a minimum of 4 to 6 weeks. [11].

Contraindications include instability of the spine from trauma, infections and metabolic or inherent bone diseases such as, osteoporosis or rheumatoid arthritis. In addition, patients must not be known to have any allergies to any of the materials used in the device. Previous surgery at the same or adjacent disc levels and multilevel disc pathology were once absolute contraindications but now clinical indications have expanded to allow surgery on these patients [12].

TDR vs ACDF Complications

Both TDR and ACDF have the same end treatment goals. These include precise decompression, preservation of movement, retaining disc height, minimizing the incidence of adjacent level disease and rapid recovery. Both operations have been shown to have similar post op complications such as psuedoarthrosis, symptomatic adjacent level herniation, radiculopathy or symptomatic adjacent segment degeneration. One study showed that adjacent level disease was greater than 10% less likely to occur, following TDR as opposed to ACDF [13]. These complications may sometimes be associated with indications for reoperation; however it has been found that the incidence for reoperation is at least four times less in patients with TDR [5,14,15].

Two main factors attribute to the increased incidence of adjacent segment degeneration after ACDF compared to TDR. Multiple studies have shown that the pressures in adjacent level discs after ACDF are at least double that of the discs following TDR [16,17,18]. Also, following ACDF, there was an increased range of motion at adjacent segments compared to after TDR which led to disc degeneration at those levels [19,20,21].

In our cases, we did not find any radiological evidence that correlated with an increase in disc degeneration in adjacent spaces. Furthermore, the most frequently described complication, heterotopic ossification (HO) and spontaneous fusion, at the level of the treated segment, was absent during the 2 year follow-up period (Figure 5). Authors have described resecting of posterior osteophytes and the hyperplastic posterior longitudinal ligament, as well as, implanting of a matching DCI, as possible methods for preventing these complications [22].

Another difference between the two operations is the cost for doing the procedures. While studies have shown that the cost for doing the two procedures are comparable; due to the increased reoperation incidence of ACDF, there is the chance that the cost for this procedure may have an overall greater total expenditure, compared to the TDR [23,24].

Radiology

In both case studies, a series of radiological imaging modalities were utilised to attain a definite diagnosis pre-

operation, and for further assessment after artificial disc placement. Magnetic resonance imaging is the most reliable and readily accessible technique in our setting, for assessing the index level, as well as, the effect posed on the adjacent cervical segments.

Preoperative assessment of affected cervical segments with magnetic resonance imaging; with a focus on spinal nerve stenosis and impaction (soft tissues); has trumped other imaging modalities, such as computed tomography [25,26]. In the post-operative setting, involving artificial disc replacement; it becomes more arduous in detailing specifics of pathology and hence image reporting, secondary to presence of artefacts.

Magnetic resonance artefacts are a known and predictable outcome with the use of metallic implants, which tend to distort images; the severity depending on the components of the metallic alloy. Titanium has been noted to cause less artefact distortion, as compared to other ferromagnetic compounds, that have potential to result in spontaneous magnetization, even in the absence of a magnetic field.

It has been shown that the use of a lower magnetic field strength with magnetic resonance imaging, may be better suited in decreasing the amount of artefact existing on imaging, while still maintaining the differentiation between disc and bone abnormalities [26]. For this reason, the use of open 0.2-T MR imaging unit should be the ideal modality of choice [26], this option is unfortunately not available in the public hospital setting.

Conclusion:

Total disc replacement is a developing procedure that is slowly taking over as the main form of treatment for cervical disc disease. The decreased risk of complications and hence, decreased re-operative rates; as well as, possible overall increased cost effectiveness, may just place the procedure as a forerunner. As the procedure is still young, further long term studies must be done to ensure that TDR will be of greater benefit to the patient than Anterior Cervical Decompression and Fusion.

The verdict on adjacent segment protection with motion preservation is still to be determined. It seems that one of the most important factors influencing motion preservation, is the proper selection of TDR candidates. In our opinion, the best indication is a younger patient, with soft disc prolapse in a moving segment, and without marked spondylotic changes.

Currently, the benefits of TDR outweigh the risks, making this operative procedure one to be considered, once the ideal patient criteria is available.

Corresponding Author: Ariel Sattaur, Department of Surgery, Eric Williams Medical Science Complex, NCRHA, Trinidad & Tobago, e-mail: asattaur88@gmail.com Phone: 492-3033 Competing Interests: None declared

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Original Scientific Article

Knowledge and attitudes of dental students and Dental Surgery Assistants at the University of the West Indies School of Dentistry towards HIV/AIDS patients

F. H. Al-Bayaty, FDRCS (Ed)¹, R. Balkaran D.D.S, MPH (Liv)¹,
P. R. Murti F.D.S.R.C.S. (Ed.)² & B. Sa Phd³

¹ The University of the West Indies, School of Dentistry, Faculty of Medical Sciences, Champs Fleurs, Trinidad and Tobago, West Indies.

² Dr. Murti is a former Professor, Oral Pathology, School of Dentistry, The University of The West Indies.

³ Centre for Medical Sciences Education at The University of the West Indies at St. Augustine Trinidad and Tobago

The University of the West Indies, School of Dentistry, Faculty of Medical Sciences, Champs Fleurs, Trinidad and Tobago, West Indies.

Phone: 868-645-2640 ext 4112

Fax: 868-645- 3823

E-mail:

Abstract

Objective: To describe dental students' and Dental Surgery Assistants' (DSAs) views towards patients with HIV/AIDS in Trinidad.

Design and Methods: All students, Interns and DSAs attending the University of the West Indies, School of Dentistry, were invited to complete a self-administered questionnaire. Questions covered knowledge of transmission, oral manifestations of human immunodeficiency virus (HIV) / acquired immunodeficiency syndrome (AIDS) and perceptions of the severity of the disease.

Results: There was a response rate of 98.9 %. Perception of the seriousness of the disease in Trinidad and Tobago was 84.8%. The participants' knowledge on the pathogenesis was 86.7%. Only 62.2 % were aware of the available treatment. The major concern when treating HIV/AIDS patients was infection 25%.

Conclusion: The study showed attitudes, knowledge and beliefs of dental students and assistants at the Dental School and further research which may involve qualitative analyses of the opinions of students and DSAs to obtain a better understanding of these views.

Introduction

According to the UNAIDS estimate in 2011, there were 2.5 million people newly infected with human immunodeficiency virus HIV worldwide [1]. In the Caribbean, the disease is second to the Sub-Saharan region where between 12000- 15000 were estimated to be living with HIV in Trinidad and Tobago (T&T) in 2011 [1]. Often, oral manifestations of HIV are early signs of HIV infection and can also be used to predict the progression to acquired immunodeficiency syndrome AIDS [3]. The condition AIDS occurs when the immune system of the HIV infected patient fails and allows the proliferation of opportunistic infections and cancers which become fatal. Oral manifestations such as candida infections, hairy leukoplakias, oral ulcers and gingival bleeding, acute necrotising ulcerative gingivitis (ANUG), necrotizing

periodontitis, leukoplakia and Kaposi's sarcoma are frequent in HIV infected patients [3]. The early recognition of the HIV disease can lead to early treatment and therefore opportunity for a prolonged lifespan of the patient

Oral manifestations in patients on Highly active antiretroviral therapy (HAART) can provide information on the failure of the treatment or resistance of the medications used in the management of patients with HIV/AIDS disease [4]. HIV cross infection, can in theory, occur in the dental setting, although this risk is probably low [5]. In a study of Canadian Dentists the refusal to treat patients was primarily associated with lack of ethical responsibility and fears relating to cross infection which may be reduced through undergraduate and postgraduate level teaching and in continuing education [6]. HIV/AIDS is associated with stigma which makes it more likely that the patient will conceal their disease risk or status [7].

Moreover, persons with HIV/AIDS may already belong to groups which are vulnerable to stigma, such as homosexuals, intravenous drug users and sex workers [8]. The World Health Organization (WHO) has therefore opined that all dentists must treat HIV- positive patients, in an effort to reduce the discrimination against persons with this disease.

Attitudes and behaviours of dentists may be as a result of their knowledge of HIV/AIDS [6]. Little, however, is known about such information from the dental students in Trinidad and Tobago with this in mind the authors conducted a study on knowledge attitudes and perceptions of dental students and DSAs towards HIV/AIDS patients. This paper is a presentation the results of a self-administered questionnaire to elicit the attitudes and perceptions of dental students towards HIV/AIDS patients and their knowledge of the disease.

Aim: To describe dental students' and Dental Surgery Assistants' (DSAs) views towards patients with HIV/AIDS in Trinidad

from the school's administration. Subjects for this study were recruited from all classes of the dental school (years one to five and the interns). Additionally, all Dental Surgery Assistants (DSAs) working at the dental school were recruited. A self-administered questionnaire consisting of thirty closed questions, formulated as multiple choice or simple yes or no was used (Appendix 1). Approval for this study was obtained from the hospital administration. The response rate was 98.9 % (180/182).

Measurements and statistical analysis

The data collected from the selected sample of dental students and DSAs about Knowledge, Attitude and Perception of HIV/AIDS were subjected to percentage; t-test; bar graph and line graph in order to transform them into meaningful data particularly, the data on sample distribution. Figure 1 shows the number of the selected sample of participants. Attitude and Perception of HIV/AIDS were treated with percentages and further sample distribution is presented with column graph. The data on knowledge of HIV/AIDS among dental students and DSAs were scored for each subscale awarding a score of 1 for correct answer and 0 for wrong answer and total score was formed by adding the each subscale score. The maximum possible total score is 67 (Maximum possible Subscale scores: Transmission – 7; Pathogenesis – 9; Signs & Symptoms – 6; Diagnosis – 5; Cross Infection – 21; Knowledge of Oral Manifestation -14 and Treatment – 5). Subsequently; the scores were subjected to t-test for large sample to see the significant differences between different groups of dental students and DSAs for each subscale and total scores. The t- test results were tested against .05 and .01 levels of significance with the critical values 1.96 and 2.58 respectively. Finally, the mean scores of different groups of dental students for each subscale and total scores were plotted in line graph (Figure 2) which clearly shows the performance of each group's dental students.

Results

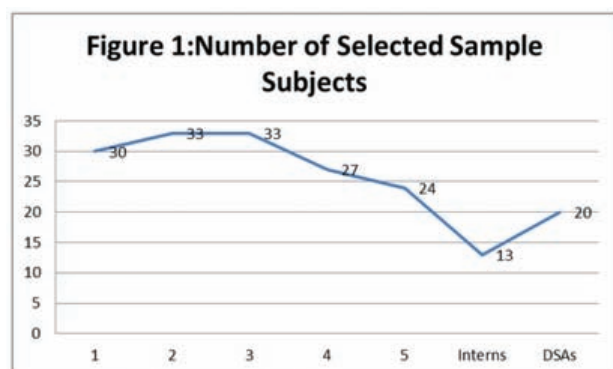


Fig 1 gives the distribution of the study sample. The largest number of students in the dental school is the year 3 students while the interns form the smallest group within the school.

Question	% of correct responses
Perception of seriousness of disease (Globally)	97.1
Perception of seriousness of disease (Caribbean)	92.9
Pathogenesis of HIV/AIDS disease	86.7
Correct expansion of acronym AIDS	85.6
Perception of seriousness of disease (T&T)	84.8
Correct expansion of acronym HIV	83.3
Cause of the disease	80.0
Treatment available	62.2
Total correct responses	70.0

Table 1: Overall responses

Table 1 shows the overall responses of the sample. The majority of participants perceived that HIV/AIDS disease was serious on a global level (97.1%) in the Caribbean (92.9 %) at large, and to a lesser extent in T&T (83.3%). The knowledge of the participants on the pathogenesis of HIV/AIDS was very good (86.7 %) and eighty percent were aware of the cause of the disease. However, only 62.2 % were aware of the available treatment for the disease.

Question	% of correct responses
Would you be a friend of an HIV/AIDS patient	54.7
Would you like to shake hands with that person	70.6
Do you consider that any dental patient is a potentially HIV infected	89.9
Would you perform CPR on a HIV/AIDS without fear of infection	7.9
Would you like to refer an HIV/AIDS patient rather than treat him/her yourself	27.9
If you do not refer, what are your concerns:	
Concerns of infection	25.0
Concerns of other patient fears	15.3
Concerns of staff fears	16.9
Concern of sterilization	16.4
Concern of your inadequate knowledge	11.8
Concern of waste disposal	14.5
Do you think the present infection control measures in the school covers HIV/AIDS patients	39.8
Do you feel you have adequate knowledge to treat HIV/AIDS patients	31.9

Table 2 Showing Perception on HIV and AIDS

Table 2 shows the perception levels. More than half (54.7%) of the participants stated they would befriend an HIV/AIDS patient however only 7.9 % would want to perform CPR on the patient. The major concern when treating patients with HIV/AIDS was that of infection (25%) while 16. 9% and 16.4 % were concerned about staff fears and sterilization respectively. Only 39.8 % perceived the infection control measures in the dental school to cover HIV/AIDS patients and 31.9 % felt they had adequate knowledge to treat this group of patients

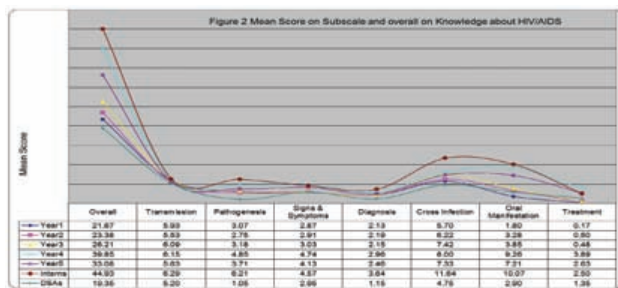


Figure 2 shows the mean score on subscale and overall knowledge about HIV/AIDS. The mean score of the Overall general knowledge of the dental interns was the highest (44.93) compared to the other groups with the DSAs having the lowest mean score of overall knowledge about HIV/AIDS (19.35). The category of cross infection was better known than that of treatment in all of the groups.

Discussion

The UWI dental school in Trinidad and Tobago offers a five year undergraduate training which leads to the degree of Doctor of Dental Surgery (D.D.S). This is followed by a vocational training program for an additional year, the internship; which is a mandatory requirement of the Dental Council of Trinidad and Tobago for those wanting to practice dentistry in Trinidad and Tobago. On average the dental school has 30 to 35 entrants annually, which would account for the disparity between the students (years 1 to 5) compared to the dental interns of 14, due to the loss of the number of students who failed in the years preceding internship.

The undergraduate program is structured in such a way that the students are taught basic sciences for the first two years and then in their third year they are taught general medicine and begin their clinical learning. The fourth and fifth year students are then taught oral diseases and public/ preventive dentistry, in addition to more in depth courses in other dental disciplines. The dental school is a teaching-based hospital, in which patients are referred to the specialists at the school, from primary health centres and private practices throughout the country; consequently, students are exposed to a wide range of patients with a variety of oral medicine and pathology needs for treatment, not the least of which is patients with

HIV/AIDS. This is owing to the fact that the incidence rates of patients with HIV/AIDS is rising where there was an increase in newly diagnosed HIV cases from 1077 in 2011 to 1284 in 2012, an increase in AIDS cases from 33 in 2011 to 47 in 2012, and an increase in AIDS related deaths from 42 in 2011 to 55 in 2012 and this trend is expected to continue [9].

The dental school teaches and implements the latest evidence-based guidelines to all students who are given the opportunity to practice universal precautions where all patients are considered to be potentially infected with blood-borne diseases. Our results showed that students' knowledge generally improved as they advanced each year in the DDS program, where the dental interns showed the highest knowledge overall compared with the lower years. These results compare to another study by Erasmus, Luiters and Brijlal [10] on dental student's knowledge, attitude and behaviour in managing HIV/AIDS patients.

Knowledge may be one of the factors involved in the willingness of dentists to treat patients with HIV/AIDS [11] and may therefore influence their attitudes and perception towards the treatment of patients with HIV/AIDS. This underscores the importance of educating and implementing guidelines for students who can then in turn employ evidence-based practices when they graduate. The DSAs were used as a comparison between the students' knowledge and persons who are not involved in the curriculum of the dental school. They had the lowest level of overall knowledge however the general trend was similar to that of the dental students. This may be due to their knowledge on the disease as it applies to their training.

Additionally, in developing countries where the HIV status is unknown or testing is difficult, certain oral lesions are strongly indicative of the presence of HIV infection [4]. This emphasizes the importance of the dentist's knowledge of the oral manifestations of HIV infection and signs of its progression to AIDS.

Conclusions

- The findings of this study show the attitudes knowledge and beliefs of dental students and assistants at the Dental School and further research is necessary in order to generalize these findings within the dental profession.
- Further research may involve qualitative analyses of the opinions of students and DSAs to obtain a better understanding of their views.

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Corresponding Author: H. Al Bayaty - hfalbayaty@gmail.com

Competing Interests – None Declared

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Appendix 1- Questionnaire
THE UNIVERSITY OF THE WEST INDIES
FACULTY OF MEDICAL SCIENCE
SCHOOL OF DENTISTRY

KAP SURVEY ON HIV/AIDS AMONG DENTAL STUDENTS, INTERNS AND DENTAL SURGERY ASSISTANTS AT THE
SCHOOL OF DENTISTRY, THE UNIVERSITY OF THE WEST INDIES, ST. AUGUSTINE, TRINIDAD AND TOBAGO.

Guidelines to answer

- Answer ALL questions in each section
- Put a tick () in an appropriate box or answer as requested
- Please note there can be more than one response for some queries

ANONYMOUS SURVEY INSTRUMENT

SECTION 1

1. Have you heard about HIV/AIDS? Yes ☐ No ☐

2. If yes, what was your source of information?

- Newspaper or Magazine Yes ☐ No ☐
- Friends/ Relatives Yes ☐ No ☐
- High School Lectures Yes ☐ No ☐
- Dental School Lectures Yes ☐ No ☐
- If not listed above,
please specify

3. When did you first become aware of the disease

- While at Primary school? Yes ☐ No ☐
- While at Secondary School? Yes ☐ No ☐
- While in the Dental School? Yes ☐ No ☐

4. Please expand the acronym below?

- (a) H
I
V
(b) A
I
D
S

5. How serious is this disease?

- (a) In the world today
- | | | | |
|------------------------|------------------------------|-----------------------------|-------------------------------------|
| Very serious | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Don't know <input type="checkbox"/> |
| Serious | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Don't know <input type="checkbox"/> |
| Like any other disease | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Don't know <input type="checkbox"/> |
| Not at all serious | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Don't know <input type="checkbox"/> |

(b) In the Caribbean at large

- | | | | |
|------------------------|------------------------------|-----------------------------|-------------------------------------|
| Very serious | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Don't know <input type="checkbox"/> |
| Serious | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Don't know <input type="checkbox"/> |
| Like any other disease | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Don't know <input type="checkbox"/> |
| Not at all serious | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Don't know <input type="checkbox"/> |

(c) In Trinidad and Tobago

- | | | | |
|------------------------|------------------------------|-----------------------------|-------------------------------------|
| Very serious | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Don't know <input type="checkbox"/> |
| Serious | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Don't know <input type="checkbox"/> |
| Like any other disease | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Don't know <input type="checkbox"/> |
| Not at all serious | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Don't know <input type="checkbox"/> |

6. Why is this disease of concern

- Social Stigma Yes ☐ No ☐ Don't know ☐
- Infective Nature Yes ☐ No ☐ Don't know ☐
- Causes suffering Yes ☐ No ☐ Don't know ☐
- Causes Death Yes ☐ No ☐ Don't know ☐
- Costly to treat Yes ☐ No ☐ Don't know ☐
- Difficult to treat Yes ☐ No ☐ Don't know ☐
- Any other,
please specify

7. What causes this disease

- | | | | |
|-------------------------------|------------------------------|-----------------------------|-------------------------------------|
| • Bad Food | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Don't know <input type="checkbox"/> |
| • Drinking Alcohol | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Don't know <input type="checkbox"/> |
| • Smoking | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Don't know <input type="checkbox"/> |
| • Virus | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Don't know <input type="checkbox"/> |
| • Bacteria | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Don't know <input type="checkbox"/> |
| • Fungus | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Don't know <input type="checkbox"/> |
| • Parasites | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Don't know <input type="checkbox"/> |
| • Mosquito Bites | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Don't know <input type="checkbox"/> |
| • Heterosexual
intercourse | Yes <input type="checkbox"/> | No <input type="checkbox"/> | Don't know <input type="checkbox"/> |

- Homosexual Intercourse Yes ☐ No ☐ Don't know ☐
- Intravenous drug abuse Yes ☐ No ☐ Don't know ☐
8. What happens in the body to result in HIV/AIDS disease?
- Nutritional deficiency Yes ☐ No ☐ Don't know ☐
- Suppression of the body's defense Yes ☐ No ☐ Don't know ☐
- Heart Defects Yes ☐ No ☐ Don't know ☐
9. Status of treatment available
- No treatment at all Yes ☐ No ☐
- Can be treated but with very little success Yes ☐ No ☐
- Can be treated but with moderate success Yes ☐ No ☐
- Can be successfully treated Yes ☐ No ☐
- SECTION 2
1. Identify the routes of transmission of HIV/ AIDS
- Bad Food Yes ☐ No ☐
- Blood Transfusion Yes ☐ No ☐
- Heterosexual Activity Yes ☐ No ☐
- Sexual Activity with infected partner Yes ☐ No ☐
- Homosexual relations Yes ☐ No ☐
- IV drug use Yes ☐ No ☐
- Mother to child Yes ☐ No ☐
- Other, please specify.....
2. The causative agent attacks?
- Erythrocytes Yes ☐ No ☐ Don't know ☐
- CD4 + cells Yes ☐ No ☐ Don't know ☐
- Macrophages Yes ☐ No ☐ Don't know ☐
- Lipocytes Yes ☐ No ☐ Don't know ☐
- Heart Muscle Yes ☐ No ☐ Don't know ☐
3. Identify the general symptoms of HIV infection from the following:
- Inability to climb steps Yes ☐ No ☐ Don't know ☐
- Pain in the chest Yes ☐ No ☐ Don't know ☐
- Progressive weight loss Yes ☐ No ☐ Don't know ☐
- Diarrhea Yes ☐ No ☐ Don't know ☐
- Prolonged Fever Yes ☐ No ☐ Don't know ☐
- Viral and Fungal Infections Yes ☐ No ☐ Don't know ☐
4. The diagnosis for HIV is established by
- ECG Examination Yes ☐ No ☐ Don't know ☐
- X-ray Examination Yes ☐ No ☐ Don't know ☐
- ELISA Yes ☐ No ☐ Don't know ☐
- Western blot test Yes ☐ No ☐ Don't know ☐
- CT Scan Yes ☐ No ☐ Don't know ☐
5. The term 'seropositive' in HIV infection means, the person has
- Good Blood Yes ☐ No ☐ Don't know ☐
- Blood indicative of infection Yes ☐ No ☐ Don't know ☐
- Less blood volume Yes ☐ No ☐ Don't know ☐
- Anemia Yes ☐ No ☐ Don't know ☐
6. What are the special concerns of a Dentist regarding HIV/AIDS patient?
- His/ her safety when treating patient? Yes ☐ No ☐ Don't know ☐
- Possibility of cross-infection Yes ☐ No ☐ Don't know ☐
- Prohibitions for tooth extraction Yes ☐ No ☐ Don't know ☐
- Excessive bleeding by patient Yes ☐ No ☐ Don't know ☐
- Oral lesions Yes ☐ No ☐ Don't know ☐
7. Identify which of the following lesions are considered markers for HIV disease
- Fordyce's condition Yes ☐ No ☐ Don't know ☐
- Hairy leukoplakia Yes ☐ No ☐ Don't know ☐
- Dental caries Yes ☐ No ☐ Don't know ☐
- Oral candidosis Yes ☐ No ☐ Don't know ☐
- Pyogenic granuloma Yes ☐ No ☐ Don't know ☐
- Kaposi's sarcoma Yes ☐ No ☐ Don't know ☐
- Non-Hodgkin's Yes ☐ No ☐ Don't know ☐
- Pleomorphic Adenoma Yes ☐ No ☐ Don't know ☐
- ANUG Yes ☐ No ☐ Don't know ☐
- (severe periodontal disease)
8. A marker associated with an oral HIV lesion is so called because
- Occurs only in full blown AIDS patients Yes ☐ No ☐ Don't know ☐
- Can occur in any individual Yes ☐ No ☐ Don't know ☐
- Can occur in asymptomatic infective state Yes ☐ No ☐ Don't know ☐
- Can lead to early detection Yes ☐ No ☐ Don't know ☐
9. Is there a correlation between CD4 cell count and oral lesions? Yes ☐ No ☐ Don't know ☐
10. If there is an injury from 'sharps' what is the risk of contracting infections by a dentist?
- Very High Yes ☐ No ☐ Don't know ☐
- High Yes ☐ No ☐ Don't know ☐
- Low Yes ☐ No ☐ Don't know ☐
- Very low Yes ☐ No ☐ Don't know ☐
- No risk at all Yes ☐ No ☐ Don't know ☐
11. If there is an injury from 'sharp', to your fingers you would:
- Ignore Yes ☐ No ☐ Don't know ☐
- Rub off the blood Yes ☐ No ☐ Don't know ☐
- Wash well and forget Yes ☐ No ☐ Don't know ☐
- Tell your friends Yes ☐ No ☐ Don't know ☐
- Tell nobody Yes ☐ No ☐ Don't know ☐
- Follow established protocol Yes ☐ No ☐ Don't know ☐
12. Risk of infection from saliva of an HIV/AIDS patient to dentists' is
- Very High Yes ☐ No ☐ Don't know ☐
- High Yes ☐ No ☐ Don't know ☐
- Low Yes ☐ No ☐ Don't know ☐
- Very low Yes ☐ No ☐ Don't know ☐
- No risk at all Yes ☐ No ☐ Don't know ☐

13. Expand the following acronym

- H
- A
- A
- R
- T
- Don't know ?

SECTION 3

1. Would you like to be the friend of an HIV/AIDS patient? Yes ☐ No ☐ Don't know ☐
2. Would you like to shake hands with that person? Yes ☐ No ☐ Don't know ☐
3. Do you consider that any dental patient is a potentially HIV infected? Yes ☐ No ☐ Don't know ☐
4. Would you perform CPR (mouth-to-mouth) be done on a HIV/AIDS without fear of infection? Yes ☐ No ☐ Don't know ☐

5. If given a choice, would you like to refer an HIV/AIDS patient rather than treat him/her yourself? Yes ☐ No ☐ Don't know ☐

6. If no, what are your concerns?
Concerns of infection Yes ☐ No ☐ Don't know ☐
Concerns of other patient fears Yes ☐ No ☐ Don't know ☐
Concerns of staff fears Yes ☐ No ☐ Don't know ☐
Concern of sterilization Yes ☐ No ☐ Don't know ☐
Concern of your inadequate knowledge Yes ☐ No ☐ Don't know ☐
Concern of waste disposal Yes ☐ No ☐ Don't know ☐

7. Do you think the present infection control measures in the school covers HIV/AIDS patients? Yes ☐ No ☐ Don't know ☐

8. Right now, do you feel you have adequate knowledge to treat HIV/AIDS patients? Yes ☐ No ☐ Don't know ☐

Original Scientific Article

Patient Satisfaction with their experience in an Accident and Emergency Department

LKT Boppana MBBS¹, Shalini Pooransingh FFPH¹, Terence Seemungal FRCP¹, Edison Haqq MBBS², MPH, I Dialsingh PhD²

¹ Faculty of Medical Sciences, The University of the West Indies, EWMSC, Champs Fleurs, Trinidad and Tobago

² Department of Mathematics and Statistics, The University of the West Indies, St Augustine, Trinidad and Tobago

Abstract

Objectives: To ascertain patients' satisfaction with staff and facilities at an accident and emergency department. **Design and Methods:** A cross-sectional study was undertaken during all shifts and on all days except Sundays at an A&E department. A previously validated questionnaire was used to conduct interviews.

Results: Two hundred patients were interviewed which included 102 males (51%) and 98 females (49%). The majority (71.5%) of patients were of Afro-Trinidadian descent. Eighty-four (84%) percent of responders said they were at least adequately attended to by the receptionist on arrival. Eighty-two per cent (82%) of responders rated the overall nursing care they received between good and excellent and 95% said they felt well respected by the doctor. Seventy-nine percent (79%) rated the overall care they received between good and excellent. Of the responders who provided suggestions (N=156), improving the wait time to see a doctor (37%), and improving the cleanliness of the restrooms and the comfort of the seating areas (35%) were the top two suggestions.

Conclusion: The majority of responders appeared to be satisfied with the care they received. In accordance with total quality improvement, hospital administrators need to note the findings and implement change in certain areas. Providing information about the triage system in the waiting area on a television screen might alter patient expectation of waiting times; ensuring a clean comfortable environment would add positively to the patient experience and at the same time uphold the WHO constitution that patients have a right to be treated with dignity and respect.

Keywords: patient satisfaction, accident and emergency, healthcare, waiting times, quality improvement

Introduction

Patient satisfaction [1] is a quality outcome of care that underpins a patient's health-care experience and is based on medical and non-medical criteria [2]. Medical criteria focus on elements such as specialist care and waiting times whereas non-medical criteria involve communication and courtesy to the patient. It has been reported that "consumers make judgments about quality by assessing factors they can appraise, such as courtesy, responsiveness, attentiveness and perceived competence." [3]

Bowling et al [4] state the ability of the system to meet patient expectation in terms of the emotional and human factors as well as clinical outcomes rates highly with patients. Similarly, Direkvand-Mogadam et al [5] found

that doctor and nurses actions and decision making are the major factors affecting patient satisfaction in emergency departments. However, several studies on patient satisfaction have also highlighted poor amenities as a source of patient dissatisfaction. [6-9]

Assessing patient satisfaction has been recognized as an efficient way to identify priorities and problems with the healthcare system.[10] Satisfaction surveys can be used to improve health care and patient outcomes. [8] The Accident and Emergency (A&E) department at the Port of Spain General Hospital (POSGH) in Trinidad and Tobago provides care and treatment [11] to patients with life threatening illnesses and accidents. These include motor vehicle accidents, gunshot or knife wounds, severe bleeding, asthmatic attacks, allergic reactions, severe chest pain, near drowning, head injury, high fever in babies and toddlers, excessive vomiting, severe abdominal pain, severe burns, overdose of pills, and ingestion of toxic substances. Approximately 200 patients present to the POSGH A&E department on a daily basis [25] The 24 hour day is divided into three 8-hour shifts from Monday to Sunday - 8:00 am to 4:00 pm, 4:00 pm to 12:00 am and 12:00 am to 8:00 am.

Accident and Emergency departments are the first port of call for many patients. At the POSGH the Canadian Triage and Acuity Scale (CTAS) [12] is in operation whereby patients are assigned a category based on how serious their injury is and how soon they need to be seen. For example, patients are assigned CTAS level 1 if they need to be seen by a physician immediately and CTAS level 4 if they need to be seen by a physician within 60 minutes upon arrival.

The aim of this study was to assess patients' satisfaction with staff and facilities in the A&E department in Port of Spain General Hospital. This study focused on patient satisfaction with respect to certain structural and process elements of healthcare such as the waiting area, toilet facilities, communication of staff from the receptionist to the treating doctor, perceived attitude of staff towards the patient.

Methods

A cross sectional study was undertaken. The study was conducted during the three- month period from April to June 2013. The study population comprised all patients who presented to the A&E department of the Port of Spain General Hospital during the study period. On average 200 patients present to the A&E department every

day. The study sample included 200 patients who were selected from each shift on all days of the week i.e. from Monday to Sunday between the hours of 8:00 am to 4:00 pm, 4:00 pm to 12:00 am and 12:00 am to 8:00 am. Systematic sampling was used whereby every 5th patient in a particular triage area was selected for interview. All persons who were suffering from diminished mental capacity were excluded from the study.

Patients were interviewed by a group of data collectors who used a previously validated and pilot tested questionnaire. [13] The questionnaire consisted of close-ended and open-ended questions. The interviews were performed immediately after the patient was seen by a doctor while the patient was waiting for a ward bed or before their discharge from the A&E department. All interviewers were trained to ask the questions in the same way and understood what each question was asking. Data items included the demographic data of the patients, the manner of the receptionist, cleanliness of the premises, and accessibility of the facility and communication skills of both the doctor and nurse in attendance. A 5-point Likert scale ranging from poor to fair to good to very good to excellent was used. The open ended questions allowed the patient to make recommendations on what s/he thought could improve the patient experience in the A&E department.

Data were entered into a Microsoft Excel spreadsheet programme and subsequently analysed using SPSS Statistical Package for the Social Sciences version 23. Responses received from the open-ended questions were reviewed for similar themes and grouped. Ethical approval was obtained from the University of the West Indies Ethics Committee and from the North West Regional Health Authority, the administrative health authority for the Port of Spain General Hospital. Patients were notified that their care would not be adversely affected if they did not participate in the study.

Results

A total of 200 patients were interviewed during the study period. During the study period it was observed that the 8am-12am period within the day was busiest with the 12am-8am shift the quietest in terms of numbers passing through. Saturdays had the least number of patients attending the Department.

There was a male to female ratio of 1:1 with the 30-45 year age group predominating. The majority of patients (71.5%) were of African Trinidadian origin. Figure 1 shows that 84% of the patients said they were adequately attended (23%), well attended (44%) and very well attended (17%) to by the receptionist when they presented to the A&E department.

Figure 2 shows that 83% of patients said they were treated with dignity and respect ranging from good to excellent and Figure 3 also shows that 82% of patients rated the level of nursing care between good and excellent. Table 1 shows that 90% of the patients were satisfied by

the professionalism shown by the doctors and 95% satisfied by the way the doctors respected them as patients.

Figure 4 shows that 79% of patients rated the overall care they received between good and excellent. Suggestions made by patients for improvement Of the 200 patients interviewed, 156 patients (78%) responded to the question about what they thought would improve their experience. Table 2 shows the various suggestions which were made by patients. The two suggestions that topped the list in terms of highest frequency were about reducing waiting times to see a doctor and reducing waiting time to get a ward bed, totalling 38%. Twelve percent (12%) suggested that there is a need for more staff. The second highest was about the facilities – the comfort of the waiting area, the state of the furniture and the toilet facilities – 35% of responses were about this. Two persons suggested that a television be added to the waiting area.

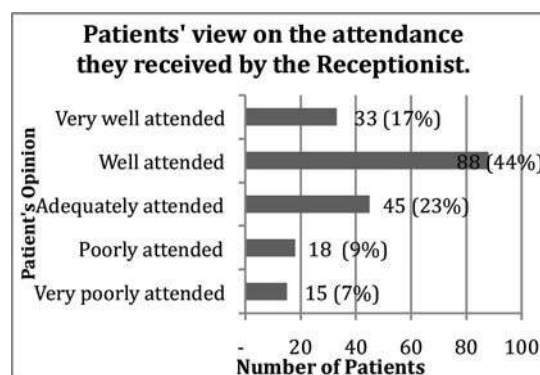


Figure 1

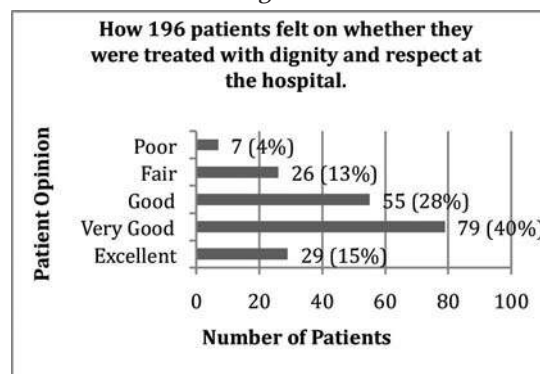


Figure 2

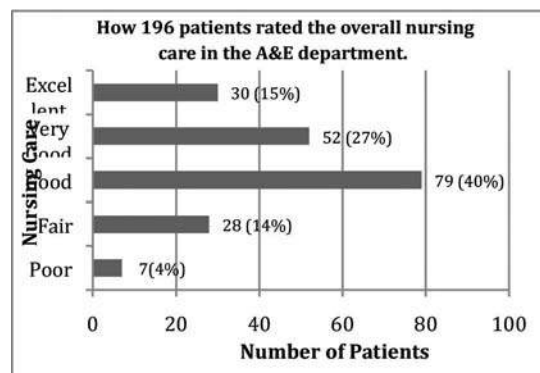


Figure 3

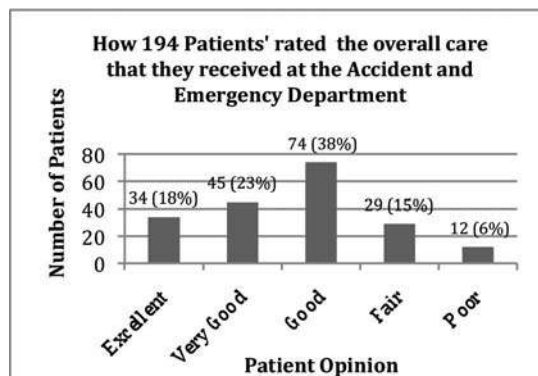


Figure 4

Level of Satisfaction	Number of patients	
	Professionalism (N=198)	Respect for patient (N=188)
Very Satisfied	64 (32%)	57 (30%)
Satisfied	114 (58%)	122 (65%)
Neither	12 (6%)	6 (3%)
Dissatisfied	6 (3%)	1 (0.5%)
Very Dissatisfied	2 (1%)	2 (1%)

Table 1: How patients rated their satisfaction with the doctors

Suggestion Made	Number of patients (N= 156)
Upgrade waiting area (air conditioning, seats etc.)	14 (12%)
Upgrade furniture and toilet facilities inside A&E	28 (23%)
Better security	8 (6%)
Reduce waiting time to be seen by doctors	45 (37%)
Reduce waiting time to get to wards	2 (1%)
Increase staff	14 (12%)
Improve communication skills of staff	9 (8%)
Distractions such as television inside A&E	2 (1%)

Table 2: Suggestions to improve patient experience in A&E department of POSGH

Discussion

This study presents data from 200 patients who attended the A&E Department of the Port-of-Spain General Hospital between April and June, 2013; the patients were sampled from all three eight-hour shifts on all days to minimise any biases associated with a Saturday or evening

attendance for example. The male to female ratio was 1:1 and the majority of patients (71.5%) were of African Trinidadian origin. There was not much difference in percentages of the age groups represented. The POS General Hospital serves areas with predominantly African Trinidadian settlers so the overrepresentation of this ethnic group is not unusual. However it is important to note though, that there are persons who will choose not to attend the public hospital and opt for private health care. For instance, there were no persons of mainly European descent or Middle Eastern ethnicity such as Syrian or Lebanese attending and these persons also inhabit areas served by the POSGH. In the UK ethnicity has been shown to influence satisfaction levels. [4,14] In Trinidad the groups represented will fall into minority ethnic group (MEGs) if this study were carried out in the UK, but are in the majority ethnic groups in Trinidad. It would therefore be interesting to explore if satisfaction levels are associated with cultural factors or from belonging to a particular MEGs or immigrant group.

The study showed that patients were generally satisfied with their experience of the A&E department in that 79% said they were overall satisfied with the service received. 84% of the patients said they were at least adequately attended to by the receptionist and 96% were satisfied with the overall nursing care. Wetmore et al state that, "patients were more likely to feel connected through relationships with other staff members" [15], with the receptionist responsible for approximately 20% for overall patient satisfaction and the nurse being responsible for 60%.

Our study participants reported satisfaction with doctors (93%) and nurses (96%) and these are similar to the findings of a study [16] in India where 70% of patients were satisfied with the care received by doctors and 78.3% were satisfied by the nursing care, in that patients were more satisfied with the nursing care.

A study [4] carried out in primary care in Trinidad found dissatisfaction among patients was associated with improper facilities such as the cleanliness of toilets and seating and long waiting times. A further study [7] found results similar to our study with 90% of patients reporting satisfaction with the medical care, demeanour of doctors and nurses and with communication. As in our study, the cleanliness of the toilets was a source of dissatisfaction.

In terms of patient suggestions, waiting times and state of facilities received the most reports. Patients may not be aware of the triage system in operation in the A&E and perhaps being told at the reception which triage category they fall within may lower their expectations of the waiting time [17]. A suggestion to place a television in the waiting area has been shown [18] to reduce the perception of time spent waiting.

According to Prakash, "Patient satisfaction is an important and commonly used indicator for measuring the quality in health care". He states that patient satisfaction is a

proxy but very effective indicator for measuring the success of doctors and hospitals.” [19]

From the study it appears that waiting times and the physical environment are important elements in determining patient satisfaction. Proper amenities enhance patient satisfaction level and willingness to return to the facility for subsequent health care needs. [5,6,20] Hence, health authorities may wish to invest in the regular maintenance and cleaning of the toilets during all shifts and refurbish the waiting area to improve the patient experience. In terms of the perception of waiting times, a television in the waiting area to explain the triage system in operation as well as to provide health information could lead to more satisfied patients. [21-24] In conclusion, this study provides useful information for the hospital in that patients are mostly satisfied with the doctors and nurses but work needs to be done to address the patient dissatisfaction with waiting time and with less than adequately maintained amenities. Healthcare managers and personnel need to remember that patients have a right to dignity and respect and this encompasses the provision of comfortable waiting areas and clean toilet facilities.

Corresponding Author: Corresponding Author-

L.K.Teja Boppana - tejaboppana@yahoo.com

Competing Interests: None declared

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Original Scientific Article

Flow Regulated vs Differential Pressure Shunts: A Prospective Analysis in Patients with Idiopathic Normal Pressure Hydrocephalus

P. G. St Louis FACS & J. Lipofsky, BS

West Indian Neurosciences

Abstract

Flow Regulated vs Differential Pressure Shunts: A Prospective Analysis in Patients with Idiopathic Normal Pressure Hydrocephalus

Guidelines for treatment of Idiopathic Normal Pressure (INPH) indicate ventriculoperitoneal shunt placement as an effective intervention. Current literature comparing Differential Pressure (DP) versus Flow Regulated (FR) Valves is lacking. This prospective study evaluates one year outcome data of 44 patients randomized to either a DP or FR valve.

Patients completed pre and post-operative evaluations to assess hallmark indicators of INPH; magnetic gait (BERG Balance Scale), cognitive dysfunction (Neuropsychological Assessment Battery [NAB]), and ventriculomegaly (MRI/CT). Patients were randomized to a DP or FR valve. The DP group resulted in BERG improvement at 12 months post-operatively when compared to baseline, however there was a slight decline in NAB (BERG 35.4 and 44; NAB: 76 and 85.7). Improvement was also noted in the FR Group at 12 months post operatively when compared to baseline (BERG 36.7 and 45.3; NAB: 75.6 and 86;). There were no shunt infections in either group. There were 2 subdural hematomas in the FR Group requiring surgical intervention, and 6 subdural hematomas in the DP Group requiring 2 surgical interventions. Four of the six subdural hematomas in the DP group were resolved by shunt reprogramming. Overall, the DP group experienced 14 additional follow up appointments and 11 additional CT scans.

Both shunt systems appear to be effective in treatment of INPH. The data from this study indicates that the use of an FR valve may result in fewer subdural hematoma/hygromas, as well as fewer follow up appointments and CT scans when compared to a DP valve.

Keywords: Normal Pressure Hydrocephalus, INPH, Shunts

Introduction:

Accepted treatment of patients with Idiopathic Normal Pressure Hydrocephalus (INPH) requires the placement of a Ventricular-Peritoneal Shunt. Placements of these devices are within the armamentarium of most, if not all neurosurgeons. The choice of a device remains an enigma. The use of a DP device has been well documented and

widely advocated in the treatment of this disorder. Comparative data regarding the efficacy of each of these devices is sadly lacking especially as it relates to the use of differential pressure (DP) and flow regulated (FR) shunts.

An initial study [1] suggested favorable outcome with the use of a non – programmable flow regulated valve (FR) in the treatment of INPH. A prospective randomized study comparing the objective outcome of patients treated with either a flow regulated or programmable differential pressure valve was then undertaken. Outcome measures at 6 months and 1 year addressed hallmark indicators of INPH such as gait instability, cognitive dysfunction, and ventriculomegaly was compared to baseline data. Post-operative complications and other factors affecting the efficacious use of these devices were reviewed and analyzed

Methods:

Ninety patients were consented and randomized into the Florida Hospital NPH Program subsequent to IRB approval. The average age of these patients was 76 years with a range of 60 – 91 years. Eighty-seven patients proceeded with surgical placement of a ventriculoperitoneal shunt. There were 51 men and 36 women. All shunt procedures were done by one surgeon (PSL), utilizing the same surgical team in the same facility. Forty-five patients were randomized to the DP group and 42 to the FR group. Patient history was reviewed to exclude secondary causes of hydrocephalus, and to include only those patients with suspected INPH. All patients completed an MRI (CT if indicated), BERG Balance Scale (BERG) and Neuropsychological Assessment Battery (NAB) at baseline then 6 and 12 months postoperatively.

To quantify INPH hallmark gait disturbances such as gait apraxia, hypokinesia, and disequilibrium [2] the BERG (BERG) Balance Scale was utilized. The BERG Balance Scale is a standard reproducible assessment which assigns a numeric value (1- 56) to patients performing balancing tasks inclusive of sitting to standing, standing on one foot, standing with feet together, and standing/sitting unsupported [3]. Though in published literature the Timed Up and Go (TUG) test was administered to evaluate gait in patients with NPH [4], the BERG by definition was designed to measure balance specifically among older individuals for quantitative descriptions of function and fall risk in clinical practice and research.

The principle cognitive symptoms seen in INPH are suggestive of a subcortical dementing process, including slowing of thought, inattentiveness, apathy, encoding and recall problems, as well as impaired executive functions [4-5]. When possible, quantifiable measures of cognitive performance (neuropsychological tests) should be used [5]. The Neuropsychological Assessment Battery (NAB) was the predominant cognitive measuring tool in this study. The NAB is a comprehensive, modular battery of Neuropsychological tests developed for the assessment of a wide variety of cognitive skills and functions in adults aged 18-97 with known or suspected disorders of the central nervous system [3]. The modules test attention, language, memory, spatial, and executive scores to generate a numerical Total Screening Index. Brain Magnetic Resonance Imaging (3 Tesla MRI) was utilized to identify ventriculomegaly. The Evan's Ratio, which is defined as the maximal width of the frontal horns measured at their extreme to the maximal biparietal diameter was documented. CSF flow studies through the Aqueduct of Sylvius such as Stroke Volume and Stroke Velocity were additionally documented components, these findings will be discussed in a future publication. Upon admission to the Florida Hospital NPH Program, the three evaluations (BERG, NAB, and MRI) were completed at baseline hospital entry. A Lumbar Sub-Arachnoid drain was then inserted and CSF was drained (10ml/hr) over 48-72 hours. Repeat testing (BERG, NAB, MRI) was then completed and the lumbar drain was removed before the patient was discharged on Day 3. Baseline testing was compared to Day 3 Data, and a likelihood of benefit was assigned subsequent to a round table discussion comprised of the specialists who treated the patients. Repeat testing (BERG, NAB, and MRI) was completed 6, 12, and 24 months post shunt placement. Patients were also clinically evaluated with CT scans between testing intervals to address over drainage or other shunt related complications.

A Flow Regulating Ventriculoperitoneal shunt (Integra NPH Low Flow Valve System™) was placed in 42 patients. These Flow Regulating valves use variable resistance to the flow of CSF at the physiological rate of CSF production. This device does not have various valve settings, and is designed to minimize potential postural and vasogenic overdrainage situations. The Integra NPH Low Flow Valve System™ flow rate is 8-17ml/hr. The average intracranial pressure (ICP) at the time of surgery in this group of patients was 18.77 cm CSF.

A CODMAN® Programmable Shunt DP valve was placed in 45 patients. These devices work on the principle of equalizing the pressure above the valve to the pressure set within the valve (Valve Opening pressure) and require a gradient to be effective. The valve Opening pressure (VOP) setting is adjustable remotely/percutaneously in 40 mm increments between the range of 30mm H2O to 180mm H2O. Average ICP at the time of surgery in these patients was 17.11 cm CSF. Initial valve (Opening) pressure was set at 120 mm H2O at the time of surgery in patients who had the DP valve.

Outcome data was available for 28 patients at 6 months and 23 patients at one year in the FR Group. Outcome data was available for 30 patients at 6 months and 23 at one year in the DP Group.

There were 21 patients who were lost to follow up for various reasons which include transportation issues, comorbid deterioration, and refusal. Five patients died of causes unrelated to their surgery during the course of the study and their data was removed.

Results:

FR Group

Initial baseline testing in 42 patients revealed mean scores of BERG: 36.7 and NAB: 75.6. Six month post-operative data in 28 patients was BERG: 44.5 and NAB: 84.2, and 12 month post-operative data in 23 patients was BERG: 45.3 and NAB: 86.0. Evan's ratio steadily decreased from Baseline: 0.35; 6 Months post-operatively: 0.33; 12 Months post-operatively 0.33.

The increase noted in BERG scores from baseline to 12 months post-operative demonstrates improvement of two standard deviations, and that a true change and marked improvement in gait and balance has occurred [6]. The increase noted in NAB scores from baseline to 12 months post-operative demonstrates marked improvement, however does not meet the standard deviation of 15 points [2]. These scores however did demonstrate improvement from "mildly impaired" to "moderately impaired" [3].

Complications of FR Group

There were 2 subdural hematoma/hygromas of the 42 patients in the FR Group. Both of these occurrences required surgery for resolution. The first patient was noted to have an increasing hygroma 2 weeks post-operatively after resuming Coumadin. The patient was taken to surgery where his hygroma was drained, and the FR shunt was replaced with a DP shunt. The second patient developed a traumatic subdural hematoma subsequent to a fall. The patient was taken to surgery where the shunt was ligated. A second surgery was necessary to reopen the shunt following hematoma resolution.

Both of these patients continue to have good outcome. Two of the 42 patients randomized to the FR Valve experienced valvular malfunctions. At the 1 year NPH evaluations, one patient noted a decline in her continence, memory, and functioning, as well as demonstrated significant decline in her BERG Balance Score. The patient was taken to surgery for a shunt malfunction and revision. The system was replaced with a new FR valve, and the patient continues to have good outcome. The second malfunction was the increasing hygroma 2 weeks post-operatively as previously stated.

One patient required a peritoneal revision due to blockage of the catheter by a peritoneal abscess.

DP Group

Initial baseline testing in 42 patients revealed mean scores of BERG: 35.4 and NAB: 76.0. Six month post-operative data in 28 patients was BERG: 43.5 and NAB: 86.3, and 12 month post-operative data in 23 patients was BERG: 44.0 and NAB: 85.7. Evan's ratio steadily decreased from Baseline: 0.37; 6 Months post-operatively: 0.35; 12 Months post-operatively 0.34.

The increase noted in BERG scores from baseline to 12 months post-operative demonstrates improvement of two standard deviations, and that a true change and marked improvement in gait and balance has occurred. The increase noted in NAB scores from baseline to 12 months post-operative demonstrates marked improvement; however it is not a standard deviation.

Complications of DP Group

There were 6 subdural hematoma/hygromas of the 45 patients in the DP group. Four of the six subdural hematomas/hygromas were able to be resolved by shunt reprogramming and utilizing the "Virtual Off" setting. To achieve resolution, an average of 6 follow ups and 4 CT scans per patient were necessary. Two of the six patients required surgery for resolution of the subdural hematoma/hygroma. The first patient developed a subdural hematoma 3 months post-operatively unrelated to trauma. His shunt was reprogrammed to "Virtual Off" to which the subdural did not resolve. This was considered to be a valvular malfunction. He was taken to surgery for a shunt revision, and another DP valve was placed. This patient continues to have good outcome.

The second patient was admitted into the ED for an acute subdural hematoma one week post-operatively. He was taken into surgery for evacuation of the subdural hematoma and shunt revision. This patient passed away due to unrelated causes two months later.

One of the 45 patients randomized to the DP valve experienced a valvular malfunction. Subdural hematoma

resolution was not achieved when the shunt was placed in the "Virtual Off" setting. This patient required surgical revision, and was discussed previously.

One patient experienced a wound breakdown, and one patient required a peritoneal revision due to blockage of the catheter by a peritoneal abscess.

Discussion

Both shunt systems (DP and FR) appear to be effective in the treatment of INPH with very comparable outcome data at 6 and 12 months. A significantly higher incidence of subdural hematomas was demonstrated in the DP group. The vast majority of these were successfully managed by shunt reprogramming however 33 % required surgical intervention.

The lower incidence of subdural hematomas, as well as the reduced need for office visits and CT scans in the FR group suggests a significant cost benefit to the patient.

Corresponding Author: Phillip G. St Louis, MD, FACS, FAANS, stlouis@ain.md

Competing Interests: None Declared

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Case Report

It Is Not as Simple as Brushing One's Teeth

S. Chandoo MBBS, V. Ramcharitar Maharaj, MRCPch (UK), J. F. Paul MBBS(UWI), FRCP(Edin), P. Robertson FRCPCH(UK), I. Sammy FFAEM & P. Nunes MRCGP

Paediatric Emergency Department, Eric Williams Medical Sciences Complex, Champs Fleurs, Trinidad and Tobago

Abstract

A 2-year old boy tripped with a toothbrush in his mouth. The toothbrush became stuck into the left cheek. Under conscious sedation an incision was made and the toothbrush extracted. This injury mechanism is fairly common and can also occur with toys, sticks and pencils. Such injuries usually don't bleed and the surrounding tissue collapses around the defect after removal. One must make sure and remove all the debris from the site to prevent infection and abscess formation. Key words: toothbrush, fall, suture, abscess, cheek

Introduction

Brushing one's teeth is no doubt usually deemed safe, as it is part of a child's daily routine. In the presented case, a 2-year old boy tripped with a toothbrush in his mouth. Though, this type of injury is fairly common, it is important that emergency medicine physicians be aware of the possibility of this type of injury. Therefore, the treatment plan, outcome and follow-up procedures required are discussed.

Case report

A 2year 11month old male was admitted to the Paediatric Emergency Department of a tertiary university hospital with a toothbrush lodged in the left buccal sulcus. Two hours before, the child was running with a toothbrush in his mouth when he tripped and fell forward. The toothbrush became stuck into the inner aspect of the left cheek. On examination, as seen in Figure 1, the handle of toothbrush was protruding from the mouth and there was an obvious left sided facial swelling that was tender to touch. There was no active bleeding but the head of the toothbrush was lodged in the left buccal sulcus as seen in Figure 2. There was no injury to the soft or hard palate or the floor of the mouth. There were no loose teeth on the affected side.



Figure 1: Initial presentation of foreign body to mouth



Figure 2: Toothbrush lodged in left buccal sulcus.

Under conscious sedation, the dental surgeon made a 1cm incision and extracted the toothbrush. There was minimal bleeding and the buccal mucosa was flushed with saline and sutured using soluble sutures as seen in Figure 3. Haemostasis was achieved and saline gauze was packed into the buccal sulcus. He was admitted for twenty-four hours observation and intravenous antibiotics. He was followed up by the dental team in the Oral Surgery Outpatient clinic and subsequently discharged one month later.



Figure 3 showing haemostasis achieved by suturing following removal of head of toothbrush.

Discussion

Foreign bodies are introduced into the oral mucosa either via traumatic means or iatrogenic means. Impalement and implantation injuries to the oral mucosa appear to be more common in children less than 4 years old.[1,2] The typical mechanism of injury is a fall with the foreign body in the mouth, resulting in implantation into the buccal mucosa or the hard or soft palate.[2] The more likely insulting agents are toys, sticks and pencils. It can also occur if a child falls onto a stationary object such as

a wall or door that can also cause impaction and extraction of teeth.[3]

Such injuries seldom bleed profusely and the surrounding tissue usually collapses around the defect when the foreign body is removed. The removal of the foreign body can be done with or without sedation based on the age of the child, his/her ability to cooperate, the proposed method of removal and duration of the procedure.[4] It is vital to ensure that the foreign body is completely removed and there is no debris remaining that can lead to infection or abscess formation[1].

Following removal of the foreign body, the wound can be left open or sutured. Follow up management should involve antibiotic therapy, ensuring there is coverage for both aerobic and anaerobic organisms. Penetrating injury to the oral mucosa can lead to serious morbidity if not thoroughly treated with antibiotics and close monitoring.[5] Frequent gargles and mouth rinse are important.[2] Cases were reported where traumatic injuries to the soft palate and the anterior faucial pillars have led to retropharyngeal abscess and mediastinitis.[1,2]

Conclusion

Brushing one's teeth is no doubt usually deemed safe, as it is part of one's daily routine. However, it is still important that such a routine procedure be properly

supervised by parents to prevent any accidents. In this presented case, the child was fortunate to have no complications from the lodged toothbrush in the buccal sulcus and it was safely removed and follow-up was uneventful.

Corresponding Author: Joanne F. Paul - pauljoanne@hotmail.com

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Case Report

A Case of a Swallowed Toothbrush

D. Ramsingh MBBS¹, T. Anthony MBBS², S. Parbhu MBBS² & S. Juman FRCS¹

¹ Department of Otorhinolaryngology, EWMSC, Trinidad

² Department of General Surgery, EWMSC, Trinidad

Case Report:

A 59-year-old male presented to the emergency department at EWMSC, Trinidad following accidental swallowing an entire toothbrush while trying to clean the back of his tongue. He did admit this was not the first time he cleaned his tongue in this manner but on this occasion it happened because his fingers slipped on the smooth surface of the toothbrush.

His only complaint on presentation was a sensation of the toothbrush stuck in his throat but no shortness of breath, voice changes or excessive salivation. He also did not express any pain on swallowing and admitted that he attempted manual removal but it was out of his reach and it continued to slip away.

Initial neck, chest and abdominal X ray did not show any foreign entity with the regions of the hollow viscera. Furthermore, a flexible laryngoscopy and upper oesophagoscopy performed with local anaesthetic also did not yield findings of a foreign body ingestion. This prompted further investigation by CT scan and this revealed the toothbrush with its proximal end (handle) pointing to the gastric fundus and the distal end (bristles) pointing towards the pylorus.

The patient was worked up and booked for an emergency open gastrotomy and removal of the foreign body under general anaesthesia. The toothbrush was retrieved from within the stomach cavity and primary repair was done. The patient had an uneventful post-operative course and was discharged from the hospital safely.

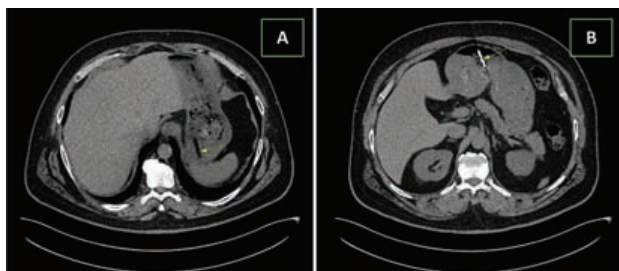


Figure 1. (A) Proximal part of the toothbrush (handle) shown by the yellow arrow in the fundus of the stomach. (B) Distal part of the toothbrush (bristles) shown by the yellow arrow in the antrum of the stomach.



Figure 2. The image of the left is the toothbrush being retrieved via open gastrotomy. The image on the right shows a fully intact delivered toothbrush in a kidney dish.

Discussion:

Patients present to the emergency department frequently following foreign body ingestion. Most commonly in the adult population is the inadvertent ingestion of fish bones (9-45%), other animal bones (8-40%) or their dentures (4-18%) [1,2,3]. In the paediatric population there is a greater variety of the swallowed object as it is usually associated with oral exploration [4]. Patients whom intentionally swallow foreign bodies usually have a history of psychiatric disease, alcohol intoxication or illicit-substance use.

Management of an ingested foreign body depends on (a) type of the foreign body, (b) its anatomical location at the time of presentation and (c) patient factors [4]. Despite this patient having no history, symptoms or signs of psychiatric disease or intoxication he presented with the rare occurrence of accidental toothbrush ingestion. Unlike small foreign bodies, a toothbrush can rarely pass through the gastrointestinal tract on its own. Eisen G. et al published in a guideline for management of ingested foreign bodies that long objects greater than 6cm will encounter considerable difficulty negotiating the curvature or sweep of the duodenum compounded by its retroperitoneal attachments [5] but there is a case which documented a toothbrush found in the large colon [6]. Unlike most cases of foreign body ingestion there have been no cases of spontaneous passage of an ingested toothbrush [7].

In nearly all documented cases of toothbrush ingestion the method of retrieval is exclusively by an endoscopic approach with use of an array of snares and forceps reserving surgery as an option if endoscopy failed or technically difficult. [4, 8, 9]. Eisen G. et al also recommended endoscopic retrieval of large objects in their guideline [5]. Although blunt and largely inert, the linear geometry of a toothbrush does pose several unique complications and hence gastrointestinal tract issues may arise. Min Lee et al documented a case of colohepatic penetration [10] and Ali S. [11] and Yuzo Umeda et al. [12] also published cases demonstrating small bowel perforations. Cox D. et al. documented a gastric perforation in a patient whom swallowed a toothbrush in attempted suicide, two (2) years prior to presentation in 2007 [13].

In conclusion, an ingested toothbrush is a bizarre accidental occurrence but despite this it is a well addressed feature in medical literature with more than forty (40) documented cases since 1988. Whether the process of ingestion is inadvertent or intentional it warrants an expedited if not emergency approach for removal to prevent potential life-threatening complications.

Corresponding Author: Dr. D. Ramsingh

- derpakramsingh@hotmail.com

Competing Interests: None declared

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Meetings Report

Social Determinants of Health

*The visit of Sir Michael Marmot to Trinidad & Tobago
22-26 July 2016*



Introduction

In July 2016, Trinidad & Tobago Medical Association was privileged to host the President of the World Medical Association, Sir Michael Marmot of University College, London. Sir Michael is a leading world expert on the Social Determinants of Health (SDH) and was the Chairman on the WHO Committee on SDH.

The Social Determinants of Health refer to the concept that our health is determined by how we are born, where we live and work, how we age and how we are educated. The “Health in all Policies (HiAP)” approach was already adopted in Suriname and a major objective was to get the HiAP concept on our National Agenda

During his visit, Sir Michael participated in two major seminars and met with the Minister of Health, CARPHA, PAHO, UWI and the American Chamber of Commerce. He also visited Laventille and “Bangladesh” in St. Joseph to get a feel what are the factors affecting occupants of these underprivileged areas.

Day 1 – July 23.

Sir Michael was interviewed by Dr. Solaiman Juman on a popular medical television show “Doctor in the House” with UWI Lecturer, Dr. Afiah Samuel from Barbados. This was followed by a trip to Maracas Beach, a meeting with the facilitators for the meeting the following day and a Dinner meeting with representatives of T&TMA, PAHO & CARPHA.

Day 2 – July 24

A landmark seminar was held at the Hilton Hotel, “Health in all Policies - A golden investment in the Social Determinants of Health”.

Sir Michael was the main speaker with the Honourable Minister of Health, Mr. Terrence Deyalsingh in attendance. There were also significant contributions from a representative from Suriname outlining their experience on HiAP. There were also significant contributions from Former Minister of Finance, Mr. Winston Dookeran, the Dean of the Faculty of Medical Sciences of UWI, Professor Terrence Seemungal and Mr. David Abdullah.

Day 3 – July 25

The day started with an early interview on TV6 Morning Edition followed by a visit to Laventille with Father Harvey.

This was followed by workshop was organized in association with the Arthur Lok Jack School of business aimed at employees in the Health Sector and other interested individuals in the HiAP principle. Attendees were allocated to attend two of the following groups with different themes: Education & Jobs, Health Services & Social Status, Physical environment, Early Childhood interventions and Life skills in the work place.

Healthy discussion was generated with many good ideas resulting.

Following this meeting, Sir Michael addressed the Academic staff at the Faculty of Medical Sciences, University of the West Indies.

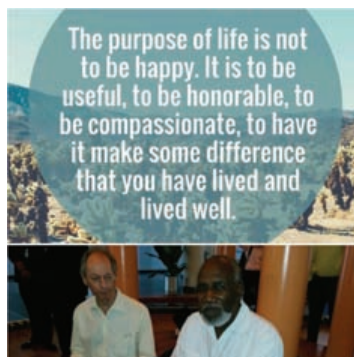
Day 4 June 26

Sir Michael met with the Minister of Health and a delegation from the Ministry followed by a Press conference.

He then conducted a Webinar facilitated by UNDP which attracted a lot of questions from listeners in the region.

To complete hectic but thoroughly successful and productive trip, Sir Michael spoke at an AMCHAM meeting at Hyatt Hotel on the relationship between Employment and Health.

The visit of Professor Sir Michael Marmot to Trinidad & Tobago was an overwhelming success in every aspect. He has had discussions and invigorated all the major stakeholders in Health and T&TMA is committed to continuing the discussion on the Social Determinants of Health and the eventual implementation of Health in all Policies in National decision-making.



Meetings Report

Neurology

The 1st Trinidad and Tobago Neurology Conference was recently held at the Hilton Trinidad Conference Centre on Sunday April 2nd 2017. The event was quite a success attracting approximately 150 Physicians from across all specialities in Trinidad and Tobago, Guyana and Barbados. The Scientific Program comprised a team of local Neurologists, Neurosurgeons, Radiologists as well as internationally acclaimed speakers. We were pleased to have Dr. Morris Scantlebury (Canada), Dr. Amza Ali (Jamaica) and Dr. Nicola Paul (United Kingdom) as feature speakers. During the daylong event the themes covered included Cerebrovascular Diseases, Headaches as well as Adult and Paediatric Epilepsy. The conference also afforded us the privilege of honouring a true giant in the

service of Neurology in Trinidad and Tobago, Dr. Premchand Ratan

The conference was held under the guidance of the Trinidad and Tobago Medical Association and was supported financially by the Private Sector who also assisted in providing an all-day exhibition hall. This meeting was fully accredited by the Accreditation Council for Continuing Medical Education.

It is the hope of the organizing committee that this meeting would become a yearly event and would act as a catalyst towards the launch of the Trinidad and Tobago Neurology Society.

Dr. Avidesh Panday



*Sitting (front row R-L): Dr. K.Aleong, Dr. P. Ratan, Dr. A.Persad, Professor S.Teelucksingh, Dr.A.Esack
Standing front row: Dr.S.Chamely, Dr. D.Ramoutar, Dr. P.Kowlessar, Dr. A. Ali, Dr. S. Sandy, Dr. R.Adam, Dr. Craig.*

Elective Report

Internal Medicine with Prof Teelucksingh

Sir Isaac Newton said, "If I have seen further, it is by standing on the shoulders of giants."

It is by these words that I chose to pursue my elective in Internal Medicine (Endocrinology), under the tutelage of Professor Surujpal Teelucksingh. I had the great privilege of attending the esteemed Prof's clinic at the Eric Williams Medical Sciences Complex (EWMSC) during my Internal Medicine rotation. These sessions were unfailingly informative and eye opening at every encounter, making Internal Medicine the obvious choice for my elective.

I had begun my elective with a clear idea of what I wished to accomplish within those four weeks, but my already high expectations were far surpassed. I was given the opportunity to see a different facet of medicine: medicine as a form of art. Through Professor Teelucksingh, I was even introduced to other fundamentals of life, such as literature and philosophy.

My colleagues and I divided our time between Professor Teelucksingh's Endocrinology clinic in EWMSC and his private practice, during which we encountered not only relatively common conditions such as Hypothyroidism, Hyperthyroidism and Diabetes Mellitus, but also more rare conditions such as craniopharyngioma, Acromegaly, Carcinoid Syndrome, Polymyalgia Rheumatica, and Systemic Sclerosis. We were able to recognise and identify these with the Professor's guidance.

On clinic days at EWMSC, we students would clerk patients for discussion with Professor Teelucksingh, and these interactions formed the basis of our learning. These cases will forever remain ingrained in my memory as the clinical pictures associated with those specific pathologies.

Later on in the elective period, we were joined by the junior clinical students. We were assigned the task of teaching them various skills, and designing activities with the purpose of acclimatising them to life on the wards.

For me, this represented a passing on of the figurative baton, in becoming the senior student.

The private practice at Medical Associates, St Joseph was a shining example of the efficiency with which a patient's medical needs could be met. The fact that all concerns raised by the patient were addressed was very impressive, and the importance of primary prevention was emphasised to us, despite being outside the scope of the patient's follow-up. The attitude, energy and courtesy which Professor Teelucksingh demonstrated consistently throughout the day was truly remarkable.

Following clinic, we senior students would accompany the consultants and housemen to the staff room, to discuss the management of the inpatients. We were encouraged by Prof to have a cup of tea before heading to the wards, in order to sharpen our minds. In fact, one of my favourite moments of the elective period was when we students joined Professor Teelucksingh and Dr. Sakhamuri for chai tea. It was at that time we were regaled with nostalgic accounts of the Professor's own past experiences, and advised on such topics as the merits of medicine, as well as the importance of having a mentor and of loving one's profession. This experience in particular was positively relaxing, and filled with an air of camaraderie.

The time spent in the company of my classmates and in close proximity to my esteemed seniors, and the lessons learned, will always remain invaluable to me. To end with a quote by Professor Teelucksingh, 'Now I have told you all the stories, go out and conquer the world,' and 'Children, leave the world in a better place than you met it.'

AVIDESH MAHABIR
Fifth Year Medical Student
The University of the West Indies
St Augustine Campus
Trinidad

Elective Report

Neurology in New Brunswick

I was privileged to spend my fourth year elective period in the neurology department at the Saint John regional hospital, New Brunswick Canada. Saint John is a small town well known for seafood and cold weather. Life there was different from home. Temperatures dropped to around -10 degrees Celsius with six inches of snow on the ground, despite it being spring. The hospital actually had to be closed one day because of a snow storm. I was fortunate to have relatives living close to the hospital with whom I stayed, and they helped me adapt to this new life. While driving through the streets you had to be very cautious to avoid hitting deer. These creatures were infamous for causing many vehicular accidents, as well as for roaming through the streets, public and private properties (Canada's equivalent to stray dogs!).

The hospital comprised four buildings, each eight stories high. My preceptor was a young man who had a special interest in strokes and as such, that encompassed the majority of my experience. I also spent some time with two other neurologists in the department, and alternated between clinics and inpatients. A team consisted of an Attending neurologist at the top of the hierarchy, residents and students (who were called clerks). My team consisted of one resident and myself as the only student. As students were designated a position which came with responsibilities, I felt like an invaluable member of the team.

A typical day started at 7.45 am sharp and continued until about 4 pm. I was assigned patients to see (either in clinic or inpatients) and had to do a history, exam, come up with a diagnosis and plan, all of which would be later reviewed with the attending. At the end of the day the attending would often thank me for joining them that day and helping out. I felt motivated as I was guided by his constructive criticism and my effort was valued.

Their efficient use of technology was an eye-opener. All the patients' notes were on the computer. All medical records, lab values, investigations, even lists of patients and their location could be accessed with the click of a mouse. To request a blood test or order medication you simply typed it in and hours later it was done. Doctors and students never spent time drawing bloods, doing IVs and lab runs. While this allowed them to make more efficient use of their time, I realised how fortunate I am as a student to have had all this hands-on experience at home.

Another aspect of the Canadian health system that I admired was the communication and integration between specialties. Technology allowed efficient and frequent communication between the specialist and family physician. On the wards when I encountered students from other teams consulting on my patient, they would not hesitate to discuss the patient with me. I saw this pattern emulated by the doctors as well. They would always casually discuss patients who were being co-

managed. My resident would also occasionally ask the nurses how a patient was doing, as a nurse was assigned to each bed and their input was important as well. On Thursday mornings my preceptor screened patients for a randomised control trial he was working on. He was very enthusiastic about consistently making improvements to patient care and using research as a means to do so. Results of research papers were regularly presented at grand rounds as a means to improve decision making in patient management.

I can vividly recall one of my more remarkable days. A 66-year-old male presented with a dense right sided hemiparesis and aphasia. After being evaluated by the neurologist he was rushed to interventional radiology for an endovascular procedure to remove the clot. I had examined the patient myself on admission, observed the procedure, and then followed him to the neuroscience intensive care unit. Only 15 minutes after the procedure had been completed, he had regained almost complete power to his right side. Needless to say, I was in complete awe (though the aphasia persisted). The next day when I went to review him, the speech and language therapist and the physiotherapist had already been to see him that day and commenced therapy. The medical team saved this man from a life of disability. Though amazed at the miracles of medicine, I lamented at the fate of many stroke patients at home.

I would definitely encourage other students, if possible, to gain some clinical experience in a developed country. Exposure to a different system could prove extremely enlightening. While the Canadian system is not without its inefficiencies, its doctors perpetually strive for improvement, always saying that this is good but we can do better. These lessons I learnt will stay with me throughout the rest of my career and I am grateful to have had this experience.

NICOLE MAHARAJ
Fifth Year Medical Student
The University of the West Indies
St Augustine Campus
Trinidad



Nicole on King Street, Saint John, New Brunswick, Canada.

Elective Report

A Sri Lankan Adventure

I opted to do my elective in clinical medicine at the University of Colombo, Sri Lanka with Colombo being the largest city in the country. As a medical student from Trinidad, I was always questioned about my decision of Sri Lanka because it was seen as unorthodox: going from a medical school in a tropical developing country to another – how would it benefit me? While many factors influenced my choice, I closely dissected the real benefits I would get from just a four week elective, and came to the agreement that I was doing my elective in a reputable university and in a country that I wanted to visit – and so the University of Colombo in Sri Lanka came forth.

Sri Lanka has free universal healthcare and the University was associated with the country's major general hospital, the National Hospital of Sri Lanka. The medical compound was massive, one of the largest in South Asia I was told. The physical setting of the wards was similar to that in Trinidad; however the book read quite differently than its cover. There was an array of specialities some I have never seen before, and I met my first snake bite and leprosy patients. The hospital was supplied with patients from within Colombo itself, but also with patients referred from the various towns and villages scattered about the island – and so there was an innumerable amount of patients with very interesting cases. I was able to structure my elective period amongst different sub-specialties in clinical medicine, and so I spent two weeks in neurology and one week each in general medicine and ophthalmology.

In Sri Lanka, three main languages are spoken – Sinhalese, Tamil and least of all, English. Luckily, the medical school utilises English as its primary language and all medical notes are recorded in English. Still, I truly appreciated the saying that a history is 80% of a diagnosis, as almost all of the patients I interacted with spoke no more than about ten words of English. Unable to take any sort of a history, I relied upon the doctor's notes and translations from my Sri Lankan colleagues. With a base knowledge of the patient's condition at hand, I proceeded to examine, and I must say that I have learnt the art of examining without words. I had to sign and demonstrate techniques on myself, and the stereotypical Indian head shake actually became my means of greeting, asking permission and expressing thanks.

Pausing for some Ceylon tea during clinic or theatre days, I truly appreciated the benefits of doing an overseas elective – experiencing a different country, diverse cultures and peoples, and a new healthcare environment. However, there was one subtle yet liberating benefit and this was the freedom I had on the wards, a freedom that the local medical students did not enjoy. While I did carry myself about in a respectful manner, being in a foreign university meant that I had no obligations to anyone, and I did not have the feeling of needing to impress or be obsequious to the senior doctors. As a result of this, my time on the wards during that four week elective was driven solely by my interest in medicine, and it was nice to study medicine without the overhanging burden of exams or deadlines.

It was quite fascinating to see how Sri Lanka's healthcare system integrated its traditional Ayurvedic and herbal medicine along with Western medicine. There were government run health facilities dedicated to this, and I visited an herbal medicine centre in a small village on the south coast. The persons at the centre were trained in traditional medicine at the tertiary level so that the delivery of it was regulated and safe – and this was crucial, as the majority of the rural population prefer traditional medicine over Western medicine. I actually purchased a few items after taking a tour of the centre.

Now, while I was a medical student between 0800 to 1400 hours on a weekday, every other moment was spent being the tourist I intended to be. I was in admiration at how the country survived through tsunami and war, and still remains the Pearl of the Indian Ocean. Sri Lankans are a wonderful people – friendly, welcoming and overly respectful. More so, they love the West Indies cricket team, so that I was always greeted by the 'Champion' dance and handshakes galore, especially when we won the both World T20 titles. Most Sri Lankans did not know of Trinidad and Tobago specifically, but they still knew of the West Indies. With that, I began to appreciate that while in the Caribbean we may view ourselves as separate countries, a great deal of the world sees us as one Caribbean and those few things which bind us together as a people are truly precious – West Indies cricket and also, the University of the West Indies.

I explored Sri Lanka as much as good sense allowed, with my stuffed backpack and the network of rustic railways, overcrowded buses and quintessential three-wheeled auto rickshaws. I travelled to the southern beaches where I was grateful for the waters of the Indian Ocean after a week in the drenching Colombo heat. The ancient cities towards the centre of the island held ruins and temples scattered over acres of greenery and dirt tracks – sites to behold and to enjoy wandering aimlessly through. I was in the countryside one night, and was walking down the road with my torchlight in search of dinner, when I stumbled across a sign that read 'Dangerous to travel after 6:00 pm: Elephants roaming'. Although I would have loved to catch an up-close glimpse of a wild elephant, I was not so eager to gamble my life and so I quickly turned around and trekked back to the guesthouse. Elephants are revered in Sri Lanka, and I was able to see these royal creatures roaming wild through a national park and leading a religious procession during a Buddhist full moon holiday. Sri Lanka was a beautiful country, and I am truly grateful for the opportunity I had for my medicine elective. My transition between fourth year and fifth year could not have been better, and to those who are considering how to approach their elective I would say do anything you want, whether it is in your own country or not – just ensure you enjoy every moment of it.

KIRIN RAMBARAN

Fifth Year Medical Student

The University of the West Indies, St Augustine Campus
Trinidad

Book Report

The challenge of an unequal world

By Professor Sir Michael Marmot



This a thoroughly enjoyable , interesting book about an un-sexy topic – The Social Determinants of Health (SDH) . Sir Michael has an easy style and is able to explain intricate connections with simple language while nailing his points home with research data. Sir Michael Marmot is

Professor of Epidemiology and Public Health at University College London and is a past President of the World Medical Association. He chaired the World Health Organization's Commission on Social Determinants of Health (2005-2008). This book looks at the inequities in the world and how they impact on health. But he does not stop there – in the last few chapters he looks at possible solutions to the issues that he has identified.

The layout of the book is provocative and logical . Sir Michael makes a compelling argument as he builds his case from chapter to chapter looking at the core principles of SDH - health risks and outcomes are affected by the conditions in the places where people live, learn, work, and play

Chapter 1 -The Organisation of Misery

"We are being foolish to ignore a broader array of evidence, which shows that the conditions in which people are born, grow, live, work and age have profound influence on health and inequalities in health in childhood, working age and older age". Sir Michael explores the role of relative and absolute poverty in determining health in a population.

Chapter 2 – Whose responsibility?

In this chapter it is argued the central to improving people's health and well- being is empowerment of individuals and communities. Should we hold people responsible for their own ill health? Or is it that 'people have poor health because they don't have health care"

Chapter 3 – Fair Society, Health Lives

"Social justice and avoidable health inequalities = Inequities" Sir Michael asks the controversial question "Are some people's life less valuable than others?".

Chapter 4 – Equity from the Start

"Childhood health affects adult healthand crime". This chapter addresses how "the accumulation of disadvantage through the life course leads to ill-health and to crime" and the role of parents and governments in influencing this process.

Chapter 5- Education and Empowerment

"Education is good ...for child survival ...and reducing fertility...and for your own health....and for protecting yourself...and for your country's development...and to moving to gender equity". The case for education as an important factor in promoting good health is emphasized

by looking at the example of Finland and their successes in health care.

Chapter 6 – Working to live

"Inequities in power, money and resources come to the work place – not just physical and chemical exposures". Your employment situation can have physical, psychosocial and financial effects which have repercussions on health.

Chapter 7 – Do Not Go Gentle

Our society is aging and measures must be implemented to empower that sector to achieve health equity.

Chapter 8 – Building Resilient Communities

Communities need to become socially habitable - the fear of crime is a public health issue. The physical environment plays an important part in the development of well being and good health , town planners need to build green cities with appropriate indoor AND outdoor components .

Chapter 9 – Fair Societies

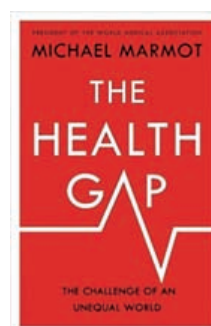
"Inequalities in society lead to inequalities in health; money matterbecause money makes the poor less poor...because money can be spent in ways that will improve lives....because inequalities damages social cohesion". Why is it that within one city, life expectancy can be predicted by the area in which you were born?– the so called "Post code lottery" !

Chapter 10 – Living Fairly in the World

In the new world order, decisions made in one country can have a significant effect on in different parts of the world. How does the price of cotton affect the suicide rate in Indian farmers? What is the role of the IMF and other international agencies in ensuring international "fairness"?

Chapter 11 – Organisation of Hope

"We are all waves of the same sea, we are all stars of the same sky, it's time to learn to live as one." – Thai song. Sir Michael "is a professional optimist". All is not gloomy, there are many examples throughout the world where changes have been made with profoundly beneficial results. "If you are in a country with poorly developed social systems, do something. It will make a difference. If your country is on the way , do more. And if you are in the Nordic countries, do it better.



DO SOMETHING. DO MORE. DO IT BETTER"

Bloomsbury Press
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Poem

Monsters

By Deneka Thomas

Author's note: "I wrote this poem because of health and how it is taken for granted. People think they only have one life to live and that gives them right to treat their bodies with little care. My aunt died from ovarian cancer and it was one of the worst times of my life seeing her suffer. She was a beautiful full thick woman and she came down to skin and bones when the cancer was done with her and after all of the fight, it took her life. She admitted it was because of poor nutritional decisions. I am a vegan now after that experience. It has almost been 3 years and I am hoping that I can motivate my immediate family to take better care of themselves. Mind and body."

The monsters we're supposed to be afraid of aren't hiding under our beds nor lurking in the shadows like we were told

They are right in front of us
With their hands outstretched waving hello, not trying to be secrets
They're everywhere
But we are so caught up in the horror stories we've been told as children can't see it.

I learned last year of one of those monsters
I learned last year about its obsession with loved ones
Its name is on the tongue of more and more people now
As more and more people are coming to know who he is
He is rampant

I know you've heard of him
Who hasn't?
You must know how he takes aunties and uncles
And mummy's and daddies and make their bodies mortuaries
I heard he tricks cells to turn on the body and builds domes in vital organs
Makes home in organs
Imagine I find myself in the mirror every morning as a mandate to check my bosom just to make sure he didn't start squatting without permission

He likes to be called tumor sometimes
But I prefer name, malignant immigrant
I never want to know mastectomy
I learned how it comes like a thief in the night and take away everything in an instant

You think Freddy Krueger scary?
What is scary is how he is just sitting here waiting for any opportunity to show up and make a mess in the form of a mass
You can't smoke, or gain too much weight, or sit down on your ass too long without exercise
Before he takes it is an open invitation
I promise this is not a monster you want to come in contact with

You think the Texas chainsaw massacre was scary?
My friend told me about a monster that sawed off his mother's foot
She said she had been fighting his attacks and hacks for years until her body became weak and her feet gave way in blood
I hear he goes by the name of Diabetes
I hear the old people who know more of him call him sugar
So stay away the sugar
Stay away from that sugar boy as much as possible
He tastes good
But does the most amount of damage

I notice your smile disappear when he's here
I notice your mouth and eyes droop down on your left side
I notice how you're scared stiff and you're paralyzed on your left side
I notice your speech slurred,
As if he threatened you,
To not make a sudden sound or else you will succumb to his insulin ways

You think Candy Man Scary?
When you stand in front of the mirror
At midnight,
About to call his name three times to see if he appears
Or whether he really exists.
Acknowledge the face of the monster in the reflection
Acknowledge how he thinks himself into becoming sick and distressed
When he becomes stressed and depressed
Look at his weapon of choice
Look how he yield his bad habits and tears down himself and doesn't take responsibility for his actions
Watch how he allows his worries to cascade like blinds and bound like chains.

I heard the worst are the monsters that take your breath away
That stops the heart from beating
The ones that pile in your arteries with the plaque cards as if in protest against the guilty pleasures you like to indulge in

The monsters that are deep fried and delicious.
The over the counter monsters
The straight from the can monsters
The monsters that mask themselves in your neglect and lack of self-management
The four shots classes on the bar counter every Friday night monsters

Who doesn't care if you're a good person?
Who doesn't care about your career?

Or that you have 5 kids and a husband or a wife
That yuh just finished school and have your entire life
ahead of you
If you don't take care of yourself and be vigilant of these
monsters who will?

I heard Prevention is better than cure.
I heard the monsters hate the taste of locally grown and
vegetables and fruits
I heard the words green and leafy makes them sick to
their stomach and stop them in their tracks
I heard regular exercise and sweating from
workout baptizes them in the name a healthier lifestyle
I heard that taking care of yourself is the first step in
keeping them away

I started by saying,
The monsters were supposed to be afraid of aren't hiding
under our beds
Nor lurking in the shadows like we were told
They are right in front of us with their hands outstretched
waving hello

Not trying to be secrets

See, we are the monsters
Look at how we are destroying ourselves,
With our hands,
With our hearts,
With the food, we eat.
With the thoughts, we think.
In the way we treat people,
And how we treat with ourselves.

Let us water the gardens that are our bodies with goodness
And watch flowers spring from our bones
Let is smile and have good relationships with each other
And watch flowers erupt from our souls.

We are the monster we should be afraid of,
But I know that we are also, everything we need to save
us.

Create Art Not War,
Deneka Thomas.

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