

International Multispeciality Journal of Health

ISSN: 2395-6291



www.imjhealth.org

Volume-8, Issue-6, June 2022

Preface

We would like to present, with great pleasure, the inaugural volume-8, Issue-6, June 2022, of a scholarly journal, *International Multispeciality Journal of Health*. This journal is part of the AD Publications series *in the field of Medical, Health and Pharmaceutical Research Development*, and is devoted to the gamut of Medical, Health and Pharmaceutical issues, from theoretical aspects to application-dependent studies and the validation of emerging technologies.

This journal was envisioned and founded to represent the growing needs of Medical, Health and Pharmaceutical as an emerging and increasingly vital field, now widely recognized as an integral part of scientific and technical statistics investigations. Its mission is to become a voice of the Medical, Health and Pharmaceutical community, addressing researchers and practitioners in below areas

Clinical Specialty and Super-specialty Medical Science:

It includes articles related to General Medicine, General Surgery, Gynecology & Obstetrics, Pediatrics, Anesthesia, Ophthalmology, Orthopedics, Otorhinolaryngology (ENT), Physical Medicine & Rehabilitation, Dermatology & Venereology, Psychiatry, Radio Diagnosis, Cardiology Medicine, Cardiothoracic Surgery, Neurology Medicine, Neurosurgery, Pediatric Surgery, Plastic Surgery, Gastroenterology, Gastrointestinal Surgery, Pulmonary Medicine, Immunology & Immunogenetics, Transfusion Medicine (Blood Bank), Hematology, Biomedical Engineering, Biophysics, Biostatistics, Biotechnology, Health Administration, Health Planning and Management, Hospital Management, Nephrology, Urology, Endocrinology, Reproductive Biology, Radiotherapy, Oncology and Geriatric Medicine.

Para-clinical Medical Science:

It includes articles related to Pathology, Microbiology, Forensic Medicine and Toxicology, Community Medicine and Pharmacology.

Basic Medical Science:

It includes articles related to Anatomy, Physiology and Biochemistry.

Spiritual Health Science:

It includes articles related to Yoga, Meditation, Pranayam and Chakra-healing.

Each article in this issue provides an example of a concrete industrial application or a case study of the presented methodology to amplify the impact of the contribution. We are very thankful to everybody within

that community who supported the idea of creating a new Research with *IMJ Health*. We are certain that this issue will be followed by many others, reporting new developments in the Medical, Health and Pharmaceutical Research Science field. This issue would not have been possible without the great support of the Reviewer, Editorial Board members and also with our Advisory Board Members, and we would like to express our sincere thanks to all of them. We would also like to express our gratitude to the editorial staff of AD Publications, who supported us at every stage of the project. It is our hope that this fine collection of articles will be a valuable resource for *IMJ Health* readers and will stimulate further research into the vibrant area of Medical, Health and Pharmaceutical Research.



Dr. Kusum Gaur
(Chief Editor)



Mr. Mukesh Arora
(Managing Editor)

Board Members

Dr. Kusum Gaur (Editor-in-chief)

Dr. Kusum Gaur working as professor Community Medicine and member of Research Review Board of Sawai Man Singh Medical College, Jaipur (Raj) India.

She has awarded with WHO Fellowship for IEC at Bangkok. She has done management course from NIHFWS. She has published and present many research paper in India as well as abroad in the field of community medicine and medical education. She has developed Socio-economic Status Scale (Gaur's SES) and Spiritual Health Assessment Scale (SHAS). She is 1st author of a book entitled " Community Medicine: Practical Guide and Logbook.

Research Area: Community Medicine, Biostatistics, Epidemiology, Health and Hospital Management and Spiritual Health.

Mukesh Arora (Managing Editor)

BE (Electronics & Communication), M.Tech (Digital Communication), currently serving as Assistant Professor in the Department of ECE.

Dr. AMER A. TAQA

Dr. AMER A. TAQA is Professor and Head in Dental Basic Science Mosul University, Mosul, IRAQ. He has been registrar of department of Dental Basic Science Mosul University, Mosul, IRAQ. He has published about 100 of research papers and out of that 50 were of international level. He has awarded many times for scientific researches by Government. He has been member of many examination committees and also is a Member in Iraqi Scientific Staff. He has been working as Editor - reviewer in many journals.

Research Area: Dental Science.

Dr. I.D. Gupta

Dr. I. D. Gupta is Professor Psychiatry and working as additional Principal and Dean of student welfare in SMS Medical College, Jaipur.

He is recipient of Prof. Shiv Gautam oration award by Indian Psychiatric Society. He has done training in YMRS at Monte Carlo and BPRS at Singapore. He has been President Indian Psychiatric Society, Rajasthan State Branch. He is author of "Psycho Somatic Disorder" chapter in 1st edition post graduate text book of Psychiatry by Vyas and Ahuja. He has also worked with National Mental Health Programme and has a lot of publication.

Research Area: Community Mental Health, Psycho somatic and liaison Psychiatry.

Dr. Lokendra Sharma

Dr. Lokendra Sharma is Associate Professor Pharmacology and working as Nodal officer of SMS Medical College, Jaipur.

He is recipient of WHO Fellowship award on Poison Patient Management at Vietnam. He is resource faculty for Experimental Toxicology and Basic Course for Medical Education. He is presented and published a lot of research articles at national and international level.

Research Area: PHARMACOLOGY

Dr. Anuradha Yadav

Dr. Anuradha Yadav is working as Professor Physiology, SMS Medical College, Jaipur (Rajsthan) India. She is a popular medical teacher and research scholar who had many publications in indexed journals.

Research Area: CVS & CNS physiology, Medical Education and Spiritual Health.

Dr. Rajeev Yadav

Dr. Rajeev Yadav is working as Associate Professor Community Medicine, SMS Medical College, Jaipur (Rajsthan) India. He is member of Research Review Board of the Institute.

He has authored a book entitled "Community Medicine: Practcal Guide and Logbook".

Research Area: His area of Interest are Epidemiology, Biostatistics and Spiritual Health.

Prof. Dillip Kumar Parida

Professor and Head in the Department of Oncology, AIIMS, Bhubaneswar.

He has done the Professional Training in Japan (Osaka University, NIBI, AHCC Research Association, Hyogo Ion Beam Center), ESTRO Fellowship in Denmark and India(AIIMS Delhi, BARC Mumbai, SCB Medical College-Cuttak, MKCG Medical College-Berhampur).

Research Area: Brachytherapy, Total Skin Electron Irradiation, Palliative Radiotherapy, Stereotactic & Conformal radiotherapy, Radiation Cell Biology, Cancer Genetics.

Dr. Praveen Mathur

Dr. Praveen Mathur is working as Professor- Pediatric Surgery and is recipient of Commonwealth Fellowship in Pediatric Laparoscopy from Uk and fellowship award in minimal access Surgery (FMAS). He has done Clinical observer ship in the Department of Pediatric Surgery, Johns Hopkins University, Baltimore, USA. (2008). He has presented and published a number of research articles at national and international level. He is reviewer of prestigious Journal of Pediatric Surgery (JPS) and World Journal of Gastroenterology, Journal of neonatal Surgery (JNS).

Research Area: Pediatric Surgery & Laparoscopy.

Dr. Lokendra Sharma

Dr. Lokendra Sharma is Associate Professor Pharmacology and working as Nodal officer of SMS Medical College, Jaipur.

He is recipient of WHO Fellowship award on Poison Patient Management at Vietnam. He is resource faculty for Experimental Toxicology and Basic Course for Medical Education. He is presented and published a lot of research articles at national and international level.

Research Area: PHARMACOLOGY.

Dr Rajeev Sharma (MS; FMAS; FIMSA;FCLS)

He is working as Professor, Department of Surgery, Government Medical College, Chandigarh, India. He has done FMAS, FIMSA and FCLS along with MS (Gen Surgery).

He has about 50 international and national publications to his credit. He has held various positions in the Association of Minimal Access Surgeons of India (AMASI) from time to time. He has also acted as instructor of various AMASI skill courses held at different places in India. He has established Surgical Technique learning centre at GMCH Chandigarh for imparting training to the budding surgeons in the field of minimal access surgery. He is also the reviewer in the subject in various journals.

Research Area: Minimal Access Surgery.

Dr Anshu Sharma (MS ANATOMY)

She is Presently working as assistant professor in the department of Anatomy, GMCH, Chandigarh. She has many publications in various national and international journals. She is executive member of Anatomical Society of India (ASI) and North Chapter of ASI. She is also a member of editorial board of Journal of Medical College Chandigarh.

Research Area: Congenital Malformation, Developmental Anatomy.

Dr. Rajeev Yadav

Dr. Rajeev Yadav is working as Associate Professor Community Medicine, SMS Medical College, Jaipur (Rajsthan) India. He is member of Research Review Board of the Institute.

He has authored a book entitled "Community Medicine: Practical Guide and Logbook".

Research Area: His areas of Interest are Epidemiology, Biostatistics and Spiritual Health.

Dr. Dilip Ramlakhyani

Dr. Dilip Ramlakhyani working as Associate professor Pathology and member of IT Committee of Sawai Man Singh Medical College, Jaipur (Raj) India. He has published many articles in indexed journals.

Dr. Virendra Singh

Dr. Virendra Singh worked as Supernatant and head of department of Pulmonary Medicine, SMS Medical College, Jaipur (Rajsthan) India.

He has gone abroad for many training courses and to present research papers. He had been chairman of Research Review Board of SMS Medical College, Jaipur. He is a great research scholar and had published book related to his faculty and had many publications in indexed journals.

Dr. Mahesh Sharma

Dr. Mahesh Sharma is a Principle specialist General Surgery in Rajasthan State Government, India. He has been PMO of district hospitals for more than 15 years. He has gone abroad as observer of many of training related to his speciality. He has published and present many research paper in India as well as abroad.

He has developed Spiritual Health Assessment Scale (SHAS) with Dr. Kusum Gaur.

Research Area: General Surgery, Health and Hospital management and Spiritual Health.

Dr. Ravindra Manohar

Professor Community Medicine, working as head of department of PSM,SMS Medical College, Jaipur (Rajsthan) India.

Previously he has worked in BP Kiorala Institute of Medical Sciences, Nepal. He has visited CDC Atlántica for a Statistical workshop. He has been convener of MBBS and PG exams. He is a research scholar and had many publications in indexed journals.

Dr. Praveen Mathur

Dr. Praveen Mathur is working as Professor- Pediatric Surgery and is recipient of Commonwealth Fellowship in Pediatric Laparoscopy from Uk and fellowship award in minimal access Surgery (FMAS). He has done Clinical observer ship in the Department of Pediatric Surgery, Johns Hopkins University, Baltimore, USA. (2008). He has presented and published a number of research articles at national and international level. He is reviewer of prestigious Journal of Pediatric Surgery (JPS) and World Journal of Gastroenterology, Journal of neonatal Surgery (JNS).

Research Area: Pediatric Surgery & Laparoscopy.

Table of Contents

Volume-8, Issue-6, June 2022

S.No	Title	Page No.
1	<p>Priapism as an Additional Clinical Presentation of Rhodesiense Human African Trypanosomiasis in Stage-1 of the Disease: A Case Report from Zambia</p> <p>Authors: Victor Mwanakasale, Balakrishnan Subramanian, Kartheek. R. Balapala, Mwaba H Mwila</p> <p> DOI: https://dx.doi.org/10.5281/zenodo.6775321</p> <p> Digital Identification Number: IMJH-JUN-2022-1</p>	01-03

Priapism as an Additional Clinical Presentation of Rhodesiense Human African Trypanosomiasis in Stage-1 of the Disease: A Case Report from Zambia

Victor Mwanakasale^{1*}, Balakrishnan Subramanian², Kartheek. R. Balapala³,
Mwaba H Mwila⁴

Copperbelt University, Michael Chilufya Sata School of Medicine, Ndola, Zambia

*Corresponding author

Received:- 04 June 2022/ Revised:- 13 June 2022/ Accepted: 21 June 2022/ Published: 30-06-2022

Copyright © 2021 International Multispecialty Journal of Health

This is an Open-Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<https://creativecommons.org/licenses/by-nc/4.0>) which permits unrestricted Non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

Abstract— Human African Trypanosomiasis (HAT) is a parasitic disease caused by a parasite called human trypanosomes. The disease is divided into two stages namely, stage-1 and stage-2. Priapism is an erectile dysfunction characterized by painful persistent erection of the penis for more than four hours and not related to sexual stimulation. We present a case of a patient in stage 1 of Rhodesiense HAT (rHAT) disease that presented with priapism. We conclude that priapism could be an additional clinical presentation of stage 1 of rHAT disease.

Keywords— Priapism, Rhodesiense, Human, African, Trypanosomiasis.

I. INTRODUCTION

Human African Trypanosomiasis (HAT) is listed among diseases referred to as Neglected Tropical Diseases (NTD) by the World Health Organisation (WHO) [1]. This disease is caused by an invasive parasite, which a hemoflagellate, that belongs to the species *Trypanosoma brucei*. There are two subspecies of *Trypanosoma brucei* that are pathogenic to humans. These are *Trypanosoma brucei rhodesiense* (*Tbr*) that causes Rhodesiense Human African Trypanosomiasis (rHAT) or East African sleeping sickness and *Trypanosoma brucei gambiense* (*Tbg*) that causes Gambiense Human African Trypanosomiasis (gHAT) or West African sleeping sickness. The parasite is transmitted to humans mainly by the bite of an infected tsetse fly belonging to the genus *Glossina spp*. The two diseases caused by *Tbr* and *Tbg* are basically the same, the difference being in the duration of the illness [2]. The acute, rapidly progressive form of the disease is rHAT while gHAT is a chronic disease and progresses at a more indolent pace. The two diseases occur in two stages namely, Stage-1, also called the Hemo-lymphatic stage, and Stage-2, also called the Meningo-encephalitic stage. In Stage-1, the parasites are confined to the blood circulation and the lymphatics. For rHAT the patient presents usually with fever and headache [3, 4, 5]. Other presentations include thyroid dysfunction, adrenal insufficiency, hypogonadism, and liver involvement [6, 7]. In stage -2, the parasite has invaded the Central nervous System. Here the patient presents with signs and symptoms of progressive mental deterioration.

Priapism is an erectile dysfunction characterized by a persistent, usually painful, erection of the penis that lasts for more than four hours and is unrelated to sexual stimulation [8]. There are many causes of this condition, even though in many instances the cause is unknown. Priapism has not been reported in literature before to be a clinical presentation of rHAT. We report a case where a patient presented with priapism in addition to the typical clinical presentations of Stage-1 of rHAT.

II. THE CASE REPORT

A 27 years old male patient was admitted on 5th January 2019 to a hospital in a rHAT endemic area in eastern region of Zambia. The patient presented with a history of generalized body pains, sore throat, inability to walk, weakness of both lower

limbs, fever, and persistent erection of the penis. The erection of the penis was beyond four hours duration and was not related to sexual act or stimulation. There was no history of trauma to the penis or perineum. On physical examination, the patient was fully conscious and all the systems were normal apart from the evident priapism. On 7th January 2019, venous blood was collected from the patient and examined for malaria parasites using the Giemsa stained Thick smear light microscopy. A full blood count was also done. The blood smear revealed presence of human African trypanosomes and no malaria parasites. The full blood count revealed thrombocytopenia. A diagnosis of rHAT was therefore made. Lumbar puncture was not done to collect cerebral spinal fluid for examination to stage the disease as the guardians refused to give consent. An assumption was made that the patient was in Stage-1 of rHAT as there were no clinical signs of Stage-2. The patient was commenced on 1g once weekly of Suramin, given intra venous, for 5 weeks starting on 18th January 2019. The patient recovered from rHAT but the priapism persisted and ended in penile fibrosis.

III. DISCUSSION

Priapism is divided into three main categories namely, Ischemic, Non-ischemic priapism, and Stuttering. This categorization is based on the etiology and pathophysiology of the condition [9]. Ischemic priapism, also known as veno-occlusive or low flow priapism is characterized by a persistent erection marked by rigidity of the corpora cavernosa and little or no cavernous arterial inflow [9]. In majority cases of ischemic priapism the cause is unknown in healthy men. However, it may occur in men with sickle-cell disease, leukaemia, or malaria. A case of priapism has been reported in a patient with *Plasmodium vivax* malaria [10]. Non-ischemic priapism is also called arterial or high-flow priapism. This is caused by unregulated cavernous arterial inflow [9]. The cause here is trauma to the penis or perineum that leads to disruption in cavernous arterial anatomy. Finally, stuttering priapism is also called intermittent or recurrent priapism. This is characterized by recurrent episodes of ischemic priapism [11, 12].

In our patient, the most likely category of priapism was ischemic as there was no history of trauma to either the penis or perineum. This is the category where malaria, as a cause of priapism, is placed [10]. Since *P.vivax* and *Tbr* are both protozoan parasites their mechanisms of priapism should be similar. Therefore, *Tbr* was the most likely cause of priapism in our patient. This was an emergency as it led to the complication of penile fibrosis, which does not occur in Non-ischemic priapism. We, however, do not rule out the occurrence of priapism in our patient as a mere coincidence.

IV. CONCLUSION

Tbr is most probably a rare cause of Ischemic priapism. Priapism could be included on the list of clinical presentations of rHAT in stage-1.

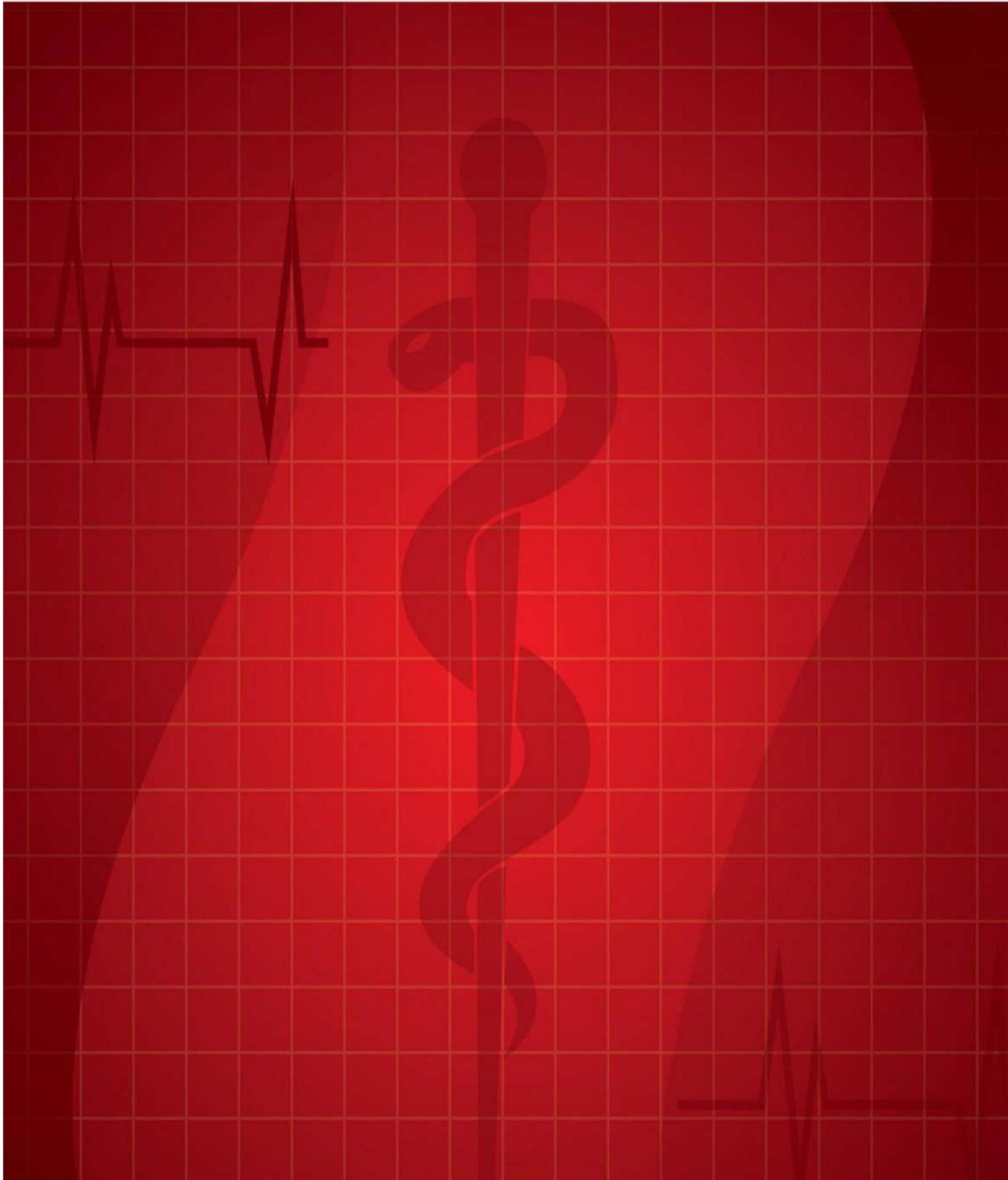
ACKNOWLEDGEMENT

We are grateful to the medical doctors who attended to our patient at the named hospital in the eastern region of Zambia and who shared his details with us. The corresponding author of this article is the coordinator for the National Trypanosomiasis control program for the Ministry of Health of Zambia and as such, he has access to all HAT patients' records in the country. We are also grateful to Professor Paul Chisale, the Vice Chancellor of the Copperbelt University, for having approved this work.

REFERENCES

- [1] WHO. Technical Report Series, 984, 2013. Control and surveillance of Human African Trypanosomiasis. *Report of a WHO expert committee*.
- [2] Welburn SC, Fevre EM, Coleman PG, Odiit M, and Mandlin I. Sleeping sickness; a tale of two diseases. *Trends in Parasitology*. 2001, 17: 19-24.
- [3] Mac Lean LM, Odiit M, Chisi JE, Kennedy PGE, Stemberg JM. Specific clinical profiles in human African Trypanosomiasis caused by *Trypanosoma brucei rhodesiense*. *PLoS Neglected Tropical Diseases*, 2010, 4: e906.
- [4] Smith DH, Wanyama L, Abinya A, Mbwabi D, Asenti A, Reardon MJ, Chumo DA, Wellde BT. Presenting features of Rhodesian sleeping sickness patients in Lambwe valley, Kenya. *Annals of Tropical Medicine and Parasitology*, 1989, 83(suppl.1): 73-89.

-
- [5] Boatin BA, Wyatt GB, Wurapa FK, Bulsara MK. Use of symptoms and signs for diagnosis of *Trypanosoma brucei rhodesiense* trypanosomiasis by rural health personnel. *Bulletin of World Health Organisation*, 1986, 64: 389-395.
- [6] Jones IG, Lowenthal MN, Buyst H. ECG changes in African Trypanosomiasis caused by *Trypanosoma brucei rhodesiense*. *Transactions of the Royal Society of Tropical Medicine and Hygiene*. 1975, 68: 388-395.
- [7] Korten JW, De Raadt P. Myocarditis in *Trypanosoma brucei* infections. *Transactions of the Royal Society of Tropical Medicine and Hygiene*, 1969, 63: 485-489.
- [8] Helen R Levey, Robert L Segal, Trinity J Bivalacqua. Management of priapism: an update for clinicians. *Ther Adv Urol*. 2014, 6(6): 230-244.
- [9] Montague D, Jarow J, Broderick G, Dmochowski RR, Heaton JP, Lue TF, Nehra A, Sharlip ID. American Urological Association guideline on the management of priapism. *J Urol*. 2003, 170, 1318-1324.
- [10] Dogra PN, Wedhwa SN, and Mehta VK. Vivax malaria causing priapism. *J. Assoc. Physicians India*. 1991. Jul; 39(7): 571-2.
- [11] Emond A, Holman R, Hayes R, Serjeant G. Priapism and Impotence in homozygous sickle cell disease. *Arch Intern Med*, 1980, 140: 1434-1437.
- [12] Broderick G, Kadioglu A, Bivalacqua T, Ghanem H, Nehra A, Shamlou R. Priapism: pathogenesis, epidemiology, and management. *J Sex Med* . 2010, 7: 476-500.



AD Publications

Sector-3, MP Colony, Bikaner, Rajasthan, INDIA

www.adpublications.org, www.imjhealth.org, info@imjhealth.org