

Sudanese Association of Paediatricians

المؤتمر العلمي الرابع عشر 14th ANNUAL CONFERENCE

Scientific Programme



26-28 July 2005
Friendship Hall
KHARTOUM





NEW AUGMENTIN SYRUP TWICE DAILY WELL TOLERATED

- Augmentin Syrup twice daily is well tolerated
- Augmentin Syrup twice daily is available in a sugar-free fruit flavoured suspension†
- Simple twice-daily dosing*

DOSING SCHEDULE

	Mild to moderate infections**	More serious infections**
Ages 2-6	2.5 ml b.d.	5 ml b.d.
Ages 7-12	5 ml b.d.	10 ml b.d.

*Lower respiratory tract, tonsillitis, skin and soft tissue infections.
†Oral media, sinusitis, pneumonia and urinary tract infections.



NEW
AUGMENTIN
AMOXICILLIN + CLAVULANATE POTASSIUM
Syrup *twice daily*
SIMPLE & EFFECTIVE

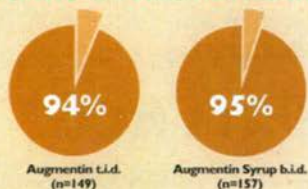
NEW AUGMENTIN SYRUP TWICE DAILY

HIGHLY EFFECTIVE

Bacterial resistance to β -lactam antibiotics is increasing¹

- Augmentin has remained consistently effective against aerobic and anaerobic bacteria²

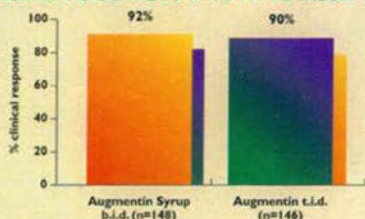
AS EFFECTIVE AS AUGMENTIN t.i.d. IN LRTIs²



²Percentage of evaluable patients with a successful clinical response at follow-up 437 children aged between 2-12 years with acute bacterial lower respiratory tract infections were treated with either Augmentin Syrup 400/57 b.i.d. or Augmentin 250/62 t.i.d. for 7 days

- No inconvenient mid-day dose whilst at school or child-care
- Augmentin Syrup twice daily was effective in children with recurrent and acute otitis media who had failed to respond to other antibiotics³

CLINICAL SUCCESS IN OTITIS MEDIA³



³111 children aged 6 months to 10 years with recurrent or acute otitis media were treated with either Augmentin Syrup 400/57 b.i.d. or Augmentin t.i.d. for 7 days

NEW AUGMENTIN SYRUP TWICE DAILY

ESPECIALLY FOR CHILDREN'S INFECTIONS

- Effective in a range of paediatric infections²
- Well tolerated²
- Simple twice-daily dosing – no inconvenient midday dose¹
- Sugar-free, fruit-flavoured suspensions (orange and raspberry flavour)



References: 1. Ball P, Geddes A, Robinson G. *J Chemother* 1997;9(3):167-98. 2. Data on file, SmithKline Beecham, 1998. 3. Jacobson S et al. *Eur J Clin Microbiol Infect Dis* 1993;12:319-324. 4. 'Augmentin Duo' 400/57. Summary of Product Characteristics.

SB SmithKline Beecham
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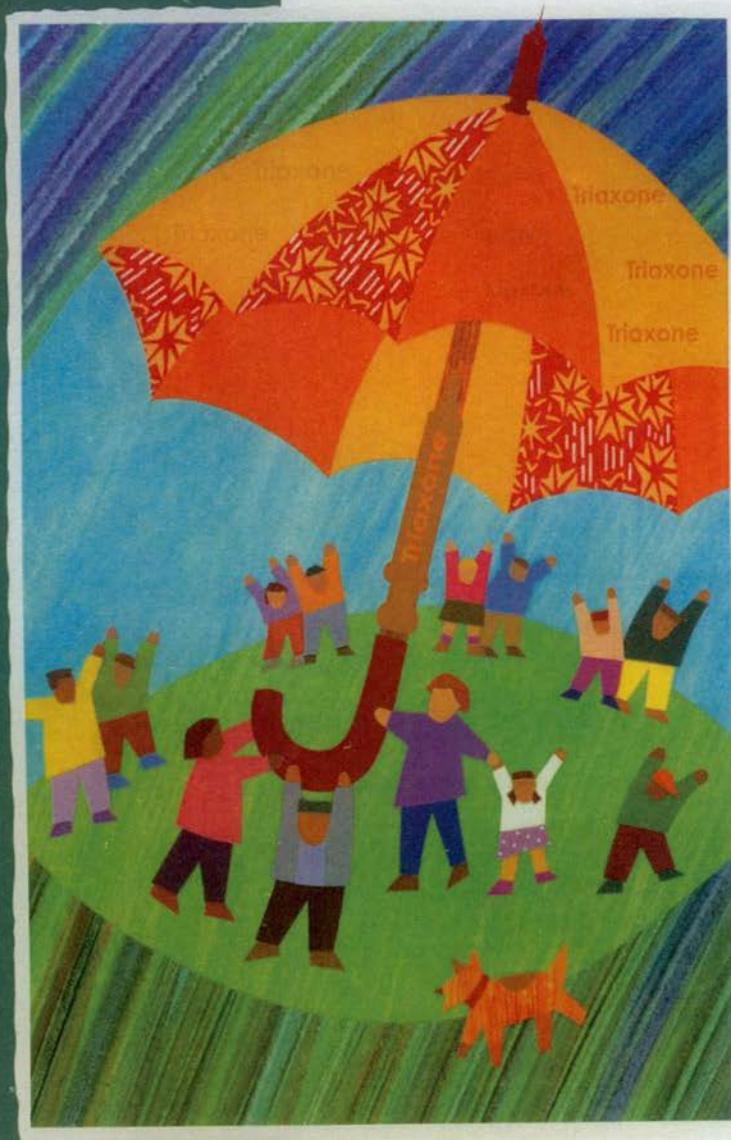
NEW
AUGMENTIN
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Syrup twice daily
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Ceftriaxone

Welcome Note

It is my pleasure to welcome you on behalf of the executive committee of the Sudanese Association of Paediatrician to 14th Scientific Conference and its social events.

The Conference is a forum for reflecting scientific advances in paediatrics as well as sharing local, regional and international experiences in the field. We salute and welcome our guests and colleagues from abroad.

This conference is convened in a remarkable timing following the historic Peace Agreement and the signing of the Constitution hopefully indicating a new era for peace, development and prosperity. One theme of the conference is focusing on child health in the post-conflict era with a special focus on children in the South and other under-developed areas.

A special tribute is deserved for paediatricians in the different states especially those working in the South, Darfur and other under-privileged states. Their resolute and dedication to the cause of children in need is admirable.

We hope the conference is going to reflect the inter-sectoral and inter-disciplinary nature of the paediatric service with its promotive, preventive and curative inputs and will reflect the research efforts of young paediatricians.

Our thanks are due to all institutions and persons who supported the effort behind this event.

We do appreciate your contributions and support.

Finally, I would like to thank all members of the association for their contributions to the activities of the association in the past two years.

Once again welcome to this scientific and social occasion.

Prof. Zein A. Karrar



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Dr. Ahlam A/Rahman



Guest Speakers:

1. Prof. Mustafa Abdalla M. Salih

*Prof of Paediatric Neurology
Faculty of Medicine
King Saudi University
Riyadh, K.S.A.*

3. Prof. Waleed Morshid

*MBBS, FRCS
Consultant Neurosurgeon
Faculty of Medicine
King Saud University, Riyadh, K.S.A.*

5. Dr. Osama H. Elshazali

*MBBS, MRCPA
Consultant Paediatric Cardiology,
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Tyne, UK*

7. Dr. Elsayed Ali,

*FRCPI, DCH, Dip Near (Lond)
Consultant Paediatric Neurologist
King Fahad Military Complex,
K.S.A.*

9. Dr. Abdelazim M. Mobarouk,

*MBBs, MPCH, DLH, CABP
Specialist Paediatrician
Alain, U.A.E*

11. Haitham Elbashir,

*Consultant Paediatrician, Great
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Primary Care Trust, London - UK
Email : haithamelbashir@hotmail.com*

13. Alhadi Elmalik,

*DCH, MRCPCH,
Consultant Paediatrician, UK*

2. Dr. Taha Altahir Taha

*MBBS, Ph. D.
John Hopkins University
Bloomberg School and Public Health,
Baltimore, MD, USA
Email : ttaha@ihsph-edu*

4. Dr. Mohamed Zien Sid Ahmed

*MBBS, MRCP, FRCP
Consultant Neonatologist
Security Force Hospital, Riyadh, K.S.A.*

6. Satti A. Satti

*Paed. And Neonatology Dept.
King Fahd Hospital,
Abha, K.S.A.*

8. Dr. Taha Sadig Ahmed,

*MBBs (Khou-) Ph.D. (Busiol, UK)
Associate Professor,
College of Medicine
Consultant Clinical Neurophysiology
King Saudi University, Riyadh , K.S.A.*

10. Dr. Asaad T. Elabbas,

*MBBs, MMs, MRCP, DCH
Consultant Paediatrician
Mayo General Hospital
Castlebar, Ireland*

12. Abdelmonem M. Hamid,

*MBBs, MRCPCH, UK
Consultant Paediatrician,
Kettering General Hospital,
Kettering, UK.*

14. Prof. Momdouh Mahfouz,

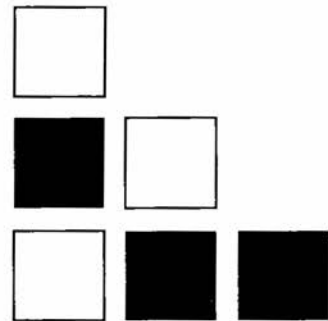
*Prof. of Radiology, Ien Shams Univ.
Cairo, Egypt.*



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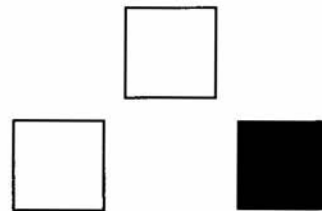
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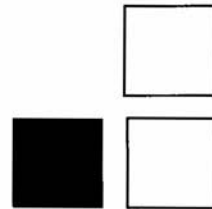
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Dr. Ali Arabi

Dr. Yasir Mahgoub Mohammed

Ms. Huda Khalid Ahmed

Mr. Mustafa Agabani, Design & Setting



**Tuesday
July 26 th.2005
Regional Hal**

08:00 – 09:00 Registration
09:00 – 10:30 Opening session
10:30 – 11:00 Breakfast

11:00 – 12:05 First plenary session
Africa Hall

Chairman : Dr. Ahmed Hassab El Rasoul
Co chairman : Dr. Yahia Omer Hamza
: Prof. Sayda Bashar

11:00 – 11:30 Peripheral neuropathy
Prof. M. A. M. Salih
11:30 – 12:00 Hydrocephalus
Dr. Waleed Murshed
12:00 – 12:30 Discussion
12:30 – 12:45 Break

12:45 – 02:05 1st free communication session

Africa Hall
Haematology & Oncology

Chairman : Dr. Elsir Hashim
Co chairman : Dr. A/Muniem Banaga

12:45 – 01:00 Pattern of childhood cancer, in Sudan
Dr. Huda Haroun
01:00 – 01:15 Dyskeratosis congenita case report
Dr. A/Rahim Satti
01:15 – 01:30 Audit of management of sickle cell crises in Children in a London Hospital
Dr. A/Moniem M. Hamid
01:30 - 01:45 Correlation between Plasma Level of V.W.F and severity of Sickle Cell Disease
01:45 – 02:05 Discussion
12:45 – 02:05 2nd free communication session

Khartoum Hall
Neurology

Chairman : Prof. Mustafa Abdella
Co chairman : Dr. Elkhair Khogal

12:45 – 01:00 Acute Flaccid Paralysis, in Port Sudan
Dr. Khalid Elkhair
01:00 – 01:15 Patterns of childhood Epilepsy in the Eastern Province of Saudi Arabia
Dr. El-Sayed Ali
01:15 – 01:30 The Importance of EEG Paediatricans
Dr. Taha Sadig Taha
01:30 - 01:45 Neural Tube Defects
Dr. Ghada Eltahir
01:45 – 02:05 Discussion
12:45 – 02:05 3rd free communication session

Omdurman Hall
Neurition & DM

Chairman : Prof. Mustafa Abdella
Co chairman : Dr. Elkhair Khogal

12:45 – 01:00 Hospital treatment of Protein Emergency
Mlanutrition Using Gerira Formula
Prof. Hassan M. Ahmed
01:00 – 01:15 Weight Gain and Survival of (SAM) Treated with IM Ceftriaxone Vs. Amoxicillin
Prof. Salah A. Ibrahim
01:15 – 01:30 Diabetes Mellitus, keton bodies in DKA
Dr. Samar Abu Samra
01:30 - 01:45 The Role of the Paediatric Diabetes Specialist Nurse
Dr. Assad T. Elabbas
01:45 – 02:05 Discussion



**Wednesday
July 27th.2005**

08:30 – 11:00 Second Plenary Session

Africa Hall

Chairman : Prof Gaffar Ibn Ouf
Co chairman : Dr. Prof. Mutwali A/Maged, Dr. Suad Eltigani

08:30 – 09:00 Advanced Paediatric Live Support (APLS), Dr. Raif Higazi

09:00 – 09:30 The Ethics of practicing Paediatric Prof. A.T.H.Eldrissy

09:30 – 10:00 Clinical Governance Model Dr. Hadi Almalik

10:00 – 10:30 Neuroimaging of Cerebral Malformation Prof. Mamdoh Mahfouz

10:30 – 11:00 Discussion

11:00 – 11:30 Breakfast

11:30 – 01:50 4th Free Communication Session

**Africa Hall
Neonatology**

Chairman : Prof Essa Elamin
Co chairman : Dr. Fawzy A/Rahim, Dr. Huda Haroun

11:30 – 11:45 CPAP Dr.Mohamed Zien

11:45 – 12:00 Management of Babies of Hepatitis C Mothers Dr. Abushuk

12:00 – 12:15 Morbidity and Mortality in Mygoma Dr. Yara Badereldin

12:15 – 12:30 IVF babies Dr. Zeinab Mohamed Gaily

12:30 – 12:50 Discussion

12:50 – 01:05 Break

**Africa Hall
Neonatology**

Chairman : A/Rahim Mohamed Zein
Co chairman : Dr. Mohamed Osman

Mutwakil,
Dr. Khalid Elkhair
Neonatal IMCI

01:05 – 01:20 Prof. Salah Ibrahim
01:20 – 01:35 Phototherapy blue V white Light

01:35 – 01:50 Dr. Abu Obaida Bala
Neonatal Gall Bladder Stone, Case Report

01:50 – 02:05 Dr. Ibrahim G. Eldawla
Infant Feeding

02:05 – 02:25 Dr. Maha Gadallah
Discussion

11:30 – 02:25 5th free communication session

**Khartoum Hall
cardiology**

Chairman : Dr. Elmufti
Co chairman : Dr. Yahia Shaker, Dr. Ali Arabi

11:30 – 11:45 Pattern of Cardiac Disease in Sudan Heart Center Dr. Sulafa KM. Ali

11:45 – 12:00 Guide lines of Echocardiology Dr. Elfatih Abozied

12:00 – 12:15 Echocardiographic findings in Sudanese children at Ahmed Gasim Hospital Dr. Siham A. H. El-Rasoul

12:15 – 12:30 Balloon Valvuloplasty for Critical Neonatal Aortic Stenosis: Initial Results & Long-term Follow up Dr. Osama Hafiz Elshazaly

12:30 – 12:45 Pattern of valvular involvement in RHD Dr. Samia Hassan

12:45 – 01:05 Discussion

01:05 – 01:20 Break

Khartoum Hall
Community Paediatric

Chairman	: Prof. Hassan Mohamed Ahmed
Co chairman	: Dr. Kamal Mohamed Khair, Dr. Hydar Elhadi
01:20 – 01:35	Street Children, Health and Social Aspects Dr. Abdel Latif Ibrahim
01:35 – 01:50	Reformatories Children Medical and Social Aspects Dr. Sanaa K. Mukhtar
01:50 – 02:05	Prevalence Intestinal Parasites in Jabal Awlia Area Dr. Amira Eltaib
02:05 – 02:25	Discussion
11:30 – 02:25	6th free communication session

Omdurman Hall
Tropicl & Infection Disease

Chairman	: Dr. Atiat Mustafa
Co chairman	: Dr. Surag Mohamed
01:20 – 01:35	Pattern of Sever Malaria in Sudanese Dr. Zeidan A. Zeidan
01:35 – 01:50	Neonatal Out come of sever Malaria with pregnancy Dr. Atif B. Fazary
01:50 – 02:05	Mothers Perception, Knowledge and Practices regarding Childhood Malaria Dr. Mubark A. Mohamed.
02:05 – 02:30	Discussion

Thursday
July 28th .2005

Omdurman Hall
Tropicl & Infection Disease

Chairman	: Prof. Ali Habour
Co chairman	: Dr. Mahgoub M. Adam, Dr. Hytham Elsaid
11:30 – 11:45	Paediatric TB Diagnosis & Treatment (U.K) Dr. Hytham Bashir
11:45 – 12:00	TB Diagnosis and treatment (Sudan) Dr. Muawia
12:00 – 12:15	Dengue Fever Dr. Amal Malik
12:15 – 12:30	Vertical Transmission of Hepatitis B Virus Dr. Hatim Gendil
12:30 – 12:45	Infection Caused by HiB Dr. Karim Eldin M. Ali
12:45 – 01:05	Discussion
01:05 – 01:20	Break

Africa Hall
08:30 – 10:30 **Third plenary session**

Chairman	: Prof. Hafiz Elshazali
Co chairman	: Dr. Elhadi Elmalik, Dr. Bakheta Ataalla
08:30 – 09:00	HIV + Breast. Feeding Dr. Taha Eltahir Taha
09:00 – 09:30	Expectrum of improvement of child health in southern Sudan Dr. Tong
09:30 – 10:00	Child Health policy in southern Sudan Fedreal Ministry of Health Dr. Eltaib A. Said
10:00 – 10:30	Discussion
10:30 – 11:00	Breakfast
11:00 – 12:35	7th free communication session



Africa Hall
Cardiac & Renal Session

Chairman : Prof Eledressy
Co chairman : Dr. Younis , Dr. Elfatih

- 11:00 – 11:15 Clinical indicators of serving of Sickle Cell Anaemia
Dr. Nagwa Elhassan
- 11:15 – 11:30 Cardiac Lesion in Sickle Cell Anaemia
Dr. Ghada Osman
- 11:30 – 11:45 Cardiac Disease in Chronic Renal Failure
Dr. Tamadur Elnur
- 11:45 – 12:00 Outcome of Treatment of Nephrotic Syndrome
Dr. Mriam Beliel
- 12:00 – 12:15 _____

- 12:15 – 12:35 Dr. Mohamed Elamin Discussion
- 11:00 – 12:30 8th free communication session

Omdurman Hall
Miscellaneous Session

Chairman : Prof Salah Ibrahim
Co chairman : Dr. Nour Elamin Osman, Dr. Bala Elsharief

- 11:00 – 11:15 Evaluation of Medical Schools in Sudan, Juba University
Dr. Walyeldin El-Nour El-Fahey
- 11:15 – 11:30 Enuresis Clinic
Dr. A/ Azim Mohd Mabrouk
- 11:30 – 11:45 Experience of Young Doctors in UK
Dr. Randa Elteгани
- 11:45 – 12:00 Nurse Role in Reducing Morbidity and Mortality
Sister Batoul
- 12:00 – 12:15 _____

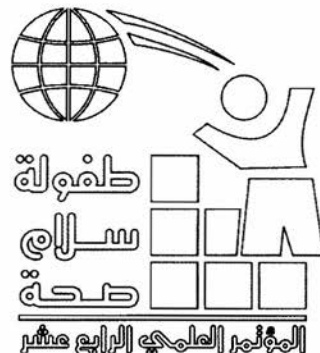
- 12:15 – 12:35 Dr. _____ Discussion

KHartoum Hall
South Session

Chairman : Prof. Z. A. Karrar
Co chairman : Dr. Rose Ajak

- 11:00 – 11:10 Child Health indicators
Prof. Z. A. Karrar
- 11:10 – 11:25 Child Health in the South, Previous Experience and Future Prospects
Prof. Mabyou M. A/ Wahb
- 11:25 – 11:40 Child Human Security in Post-Conflict Sudan
Dr. Hassan El Obied
- 11:40 – 11:55 Post War Psychological Trauma to Children
Dr. A/ Basit Merghani
- 11:55 – 12:10 _____

- 12:10 – 12:30 Dr. _____ Discussion
- 11:00 – 12:35 9th free communication session



Peripheral Neuropathies in Children

Prof. M. A. M. Salih

The paper provides an update on acute and chronic forms of peripheral neuropathies in children. Acute forms result in acute flaccid paralysis and include neuropathies of infectious diseases such as diphtheria, brucellosis and neuroborreliosis. They also include acute toxic neuropathies due to heavy metals (lead and mercury) and organophosphates. Following success in controlling immunizable diseases in childhood, the immune-mediated neuropathy, Guillain-Barre syndrome, is gaining significant importance. The review will highlight the subtypes of Guillain Barre syndrome (including Miller Fisher syndrome), their pathogenesis and recommended protocols for their management.

Chronic forms, on the other hand, encompass the inherited diseases of the peripheral nerves. Of these, the autosomal recessive (AR) types of Charcot-Marie-Tooth (CMT) are relatively more prevalent in North Africa and the Arabian Peninsula because of the high rate of consanguinity. This contrasts with the mainly dominant forms seen in Europe and the US. Two major phenotypes have been distinguished, in which the neuropathy is either demyelinating (CMT1) or axonal (CMT2). Several new entities were described in highly inbred Saudi Arabian and North African countries. Currently, more than 9 loci and 6 genes have been identified.

In a collaborative research, we described the first identified gene causing an AR type of CMT. The gene (Myotubularin-related 2 gene, MTMR2) and its mutations that lead to an AR severe demyelinating neuropathy, was identified in one Italian kindred and two Saudi Arabian families. This gene, located on chromosome 11q22, was found to encode the myotubularin related protein2. Further studies on the Saudi and Italian families revealed that MTMR2 interacts with neurofilament light chain protein (NF-L), the deficiency of which causes another axonal form of CMT (CMT2E). The data further supported the notion that hereditary demyelinating and axonal neuropathies may represent differential clinical manifestations of a common pathological mechanism.

Other phenotypically novel myelinopathies, axonopathies and other complex forms of CMT that have been described in North African and Saudi Arabian populations await to have their genetic loci unravelled. In another joint study, we described a new gene that causes spinocerebellar ataxia associated with axonal neuropathy (SCAN1). The gene, Tyrosyl-DNA phosphodiesterase 1 (TDP1) may cause SCAN1 either by interfering with DNA transcription or by inducing apoptosis in postmitotic neurons.



Child Human Security In post conflict Sudan

By: **Dr. Hussein Elobeid.**
helobeid@hotmail.com

Nation coming of along standing intrastate conflict experience a shift in perspective from state to individual human security and Sudan is a classical example. The GoS and SPLM/A have identified, through the JAM process, the human security elements of landmines action, DDR, IDPs reintegration and SSR as the corner-stone for peace building. However, landmines, firearms and unaccompaniedness are considered as the major child human security threats. Almost all the battlefields of the civil war (The South, NM, BN and Kassala) have witnessed indiscriminate use of landmines. Landmines will continue to maim and kill (20 – 50% mortality rate) humans, particularly civilian population (92% of the victims in Kassala state were civilians). Landlines denied access to health facilities in Kassala state (9% of hospitals, 5% of health centres and 3% of the dispensaries). The food security was severely affected in Kassala state and consequently impacted the health and nutrition, particularly that of women and children. Availability and use of SALW create insecurity, encourage crime, freeze community development and deny the future generation (children) their right for survival and development. The redundancy of 100,000 child solders and availability of SALW constitute a major security hazard and exacerbate childhood vulnerability. Physical and psychological trauma, spread of infectious diseases including HIV/AIDS and child destitute in general impose extra health burdens. Unaccompanied minors released from the war hostage back to the communities a pause daunting challenger for action. Child health professionals are at cross-roads to decide on how to react to child health challenges for post conflict Sudan, at the broader political landscape, whereby contributing to durable peace building of the nation.



An Update on Childhood Neuromuscular Disorders

Mustafa A.M. Salih

Professor, Division of Paediatric Neurology, Department of Paediatrics, College of Medicine, King Saud University, Riyadh, Saudi Arabia

The paper highlights the epidemiologic, clinical and genetic profile of neuromuscular disorders in childhood and the contribution of research from the Region to the identification of new entities and unravelling of the molecular pathologic features of these

diseases. This is expected to help in prevention through informed genetic counselling and in designing new modalities of therapy.

With regards to diseases of muscle, it has been established that the integrity of the cytoskeletal-extracellular linkage, mediated by the dystrophin glycoprotein complex (DGC), is important to the muscle membrane stability, and loss or abnormality of certain components lead to a disruption of this linkage and cause various forms of MD. So far, at least seven different MDs are related to abnormalities of the DGC.

“Adhalin”, derived from the Arabic word “Adhal” for muscle, is one of the DGC which has recently been implicated in the pathogenesis of severe childhood autosomal recessive muscular dystrophy (SCARMD). During the last two decades, (SCARMD) was identified as a unique form of MD with high prevalence in populations of Arab descent in Africa and the Middle East. Over the decade 1982-1993, it was found to be commoner (30%) than Duchenne MD (25%) and similar to congenital MD (30%) at King Khalid University Hospital (KKUH) in Riyadh.

The paper reviews the clinical and molecular pathological features of SCARMD seen in Sudan and Saudi Arabia; a newly described form of MD associated with deficiency of a component of the DGC (α -dystroglycan); and a novel mutation in a Saudi family with congenital MD due to partial deficiency of another component of the DGC (i.e. merosin or LAMA2). A fifth new variant of congenital MD characterized by arthrogryposis multiplex, cobblestone lissencephaly and merosin (LAMA2)-positive immunohistochemistry will also be described, as well as, a sixth novel form (Salih, CMD). The latter was first described in a Sudanese family and is characterized by congenital hypotonia associated with minimal myopathic changes and type-1 fibre predominance on muscle histology. Following achievement of motor developmental milestones, affected patients started to show progressive weakness associated with features of left ventricular dilated cardiomyopathy. Repeated muscle biopsies revealed florid dystrophic features with normal expression of the DGC, including merosin (LAMA2). Integrin β 7 and α -dystroglycan (which has been discovered recently to be deficient in sub-groups of patients who present with congenital MD) were normally expressed in these patients.



Mothers' Perception, Knowledge and Practices regarding Childhood Malaria in Sudan

Mubarak A/ Rahman Mohamed, *MBBS (U. of K.)*

Professor Zein Alabdin A. Karrar

This is a descriptive, cross-sectional, community-based study conducted between January–June 2004. Five areas representing the endemicity categories in Sudan were selected. They were Khartoum (urban malaria), Shandi (hypo endemic), Gedarif (seasonal malaria), Kenana (irrigated malaria) and Wau (Perennial high transmission malaria).

655 mothers of under 5 children were chosen through a multi stage random sampling; 200 of them at health facilities accompanying their febrile children, who were examined & a BFFM was taken for them and 455 mothers at household level.

330 (50.4%) of mothers, reported fever in last two weeks, 180(55.6%) of these were due to malaria. However, the reported incidence of malaria during the survey time was only 11(5.5%).

The perceived causes of fever were malaria in 396(62.8%), pneumonia 286(43.3%) & measles 92(14.6%). Convulsions as a risk of high fever was mentioned by 373 (57.9%). Educated mother were significantly had better knowledge about fever causes and risk factors than illiterates.

The causes of malaria as perceived by mothers include: mosquito 558(86.3%) exhaustion, dirt, bad food & blood transfusion. Fever and vomiting were the commonest symptoms of malaria mentioned by 532(82%) & 380(58.6%) respectively; while cough was the least 47(7.2%).

More than 254 (40%) mothers think that severe malaria presents with convulsions, while only 25 (3.9%) mentioned jaundice and/or pallor. Education significantly affects knowledge of danger signs, but ages of the mothers significant only in not able to drink or breast-feed.

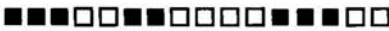
595 (93.4%) mothers thought that BFFM was important, but 366 (56.4%) believed that antipyretics given at home will affect the result.

485(74.7%) of mothers sought help at a HF for childhood fever, 276(42.5%) gave home-treatment and 52(8%) visited traditional healers. For malaria 608(93.7%) visited a HF, 26 (4%) gave home treatment and only 28(4.3%) went to traditional healers; however, only 13(6.6%) visited HF within 24 hrs of fever.

For convulsion, 355(55.8%) would visit HF & only 22(3.2%) mentioned traditional healers. Home-treatment of fever included cool bath in 327(57.8%), paracetamol in 122(21.6%) and home remedies in 62(11%). Traditional treatment of malaria included use of Aradaib (*Tamarindus indica*), Neem, Bee stings & others. Chloroquine was the commonest antimalarial mentioned by 597(93.7%) and artemether was the least reported by 54(8.5%). Correct chloroquine dose was given by 67(72%) & two thirds of mothers preferred oral drugs.

Bed nets as prevention method was mentioned by 524(80.8%), but only 214(59.3%) were using bed nets.

The direct cost of malaria treatment ranged from 0.19 to 76.6 US\$ with an average 4.7 us \$; and the media was the main source of information about malaria to 196 (33.4%) of mothers, health worker to 143(24.4%) and 225(38.3%) had only their own experience. Education and age of the mother affects their knowledge & practices towards febrile children especially in treatment seeking, using tepid spongies at home and good knowledge about malaria prevention. Implementing IMCI strategy & reducing the cost of treatment for under 5 years children are important in improving health seeking behaviour and then malaria control.



The Ethics of Practicing Paediatrics

A.T.H. Elidrissy

The duty of physician practicing paediatrics is to care for a sick child with the aim of preventing mortality and reducing morbidity. To achieve this it is vital to prevent the killing 6 diseases . The cost of providing curative and preventive measures is the responsibility of the government and it is a priority tm medical personnel. Islam started the support of children's life and health. The first person to do this was the second Khalifa Syidna Omer IBN Al Khattab who was giving subsidiary to prevent malnutrition to every child after being weaned, but on noticing that mothers were resolving to early weaning (i.e. before completing 2 years), he ordered subsistence for every child born in the Islamic governments from Iraq to Egypt .Accordingly health of children is the responsibility of the Islamic government .Parents specially in the poor sector of the community can not afford to pay for cost of curative paediatrics. We paediatricians, and definitely everybody else, strongly believe that children are born to live. Accordingly, any childhood disease is an emergency and comes under the President Omer Al-Bashir's ruling for Free Emergency Services to everybody. Any sick child should benefit from this presidential statement and treated free of charge in any state or national government curative institute.

The physicians working in paediatrics also should follow the code of ethics of practice which is in line with all religions. In Islam, Ibn Alqa'im Aljouzia has put the 20 commands of ethical practice which should be followed by every physician.

Our aim is a healthy children community to have a healthy future based on devotion, justice and mercy.



An Open Randomized Clinical Trial to Compare Weight Gain and Survival in Acutely Malnourished Children Treated with a Two-day Intramuscular Ceftriaxone Regimen Versus Standard Oral Amoxicillin

- 1- Vincent Brown**
- 2- Christine Dubray**
- 3- Salah Ahmed Ibrahim**
- 4- Mohammed A/Muttalib**

-
- 1- Director, Epicentre – MSF, Paris**
 - 2- Clinical trial researcher, MSF, Khartoum**
 - 3 Department of Child Health, Faculty of Medicine, U of K**

Severe acute malnutrition (SAM) has long time been recognized as a major public health issue. The association between infection and SAM has been largely documented. To lower deaths associated with infection, systematic broad-spectrum antibiotic has been recommended for the management of SAM. However the appropriate antibiotic regimen which is effective, of low cost and «easy-to-use» especially under field conditions has not been determined.

The objective of this open randomized controlled clinical trial was to compare the effectiveness of a 2-day intramuscular ceftriaxone regimen (75 mg/kg/day), with a 5-day oral amoxicillin regimen (80 mg/kg/day).

Children aged 6 to 59 months admitted with SAM to the treatment and feeding centre at Mayo clinic (MAYO – TFC) were randomized into ceftriaxone group and amoxicillin group. Success was the proportion of children presenting an increased weight gain (WG) of at least 10 g/kg/day calculated over a period of 14 days starting as soon as the child's weight curve presented a first increase

A total of 460 children were included and randomized in the trial. Of them 228 were followed up in the ceftriaxone group and 230 in the amoxicillin group. The proportion of success for the primary outcome among the 458 children followed up was 56.1% (128/228) in the ceftriaxone group and 53.9% (124/230) in the amoxicillin group (Odds Ratio (OR): 1.01; 95%CI: 0.76 – 1.58). Results for exit outcomes for the 458 children followed up were 74.6% (170/228) of children cured in the ceftriaxone group and 70.0% (161/230) in the amoxicillin group (OR=1.26; 95%CI: 0.82-1.93); CFR was 3.1% (7/228) in the ceftriaxone group and 3.9% (9/230) in the amoxicillin group (OR = 0.78; 95%CI: 0.26-2.33)

The results of the study did not demonstrate statistically the superiority of short course ceftriaxone regimen on standard amoxicillin among children with SAM. Injection of

ceftriaxone was painful and administration of oral amoxicillin could be fastidious. The choice between these two types of regimen is therefore more related to operational considerations. In time of massive arrival of children with severe acute malnutrition the use of ceftriaxone would not only facilitate the work of medical personnel but would also save more lives.



Hospital Treatment of Protein Emergency Malnutrition Using Gezira Formula

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Professor of Paediatrics

Faculty of Medicine, Academy of Medical Sciences & Technology, Khartoum, Sudan

About 11 million children aged 0-4 die world wide every year and 99% are in developing countries. Malnutrition is associated with 60% of these deaths. There is no unified policy in Sudan for dietary treatment of protein energy Malnutrition (PEM). Different hospital use different guidelines and different formula concentrations. Guidelines have been developed by WHO in improve quality of hospital care for malnourished children.

This paper describes the treatment protocol of Gezira formula and comparing the approach in use to WHO guidelines for inpatient treatment of severely malnourished children.

The study period was about 4 years started on May 2000 and terminated in Marci 2005. A total pf 351 children were included. History and physical examination were recorded in standard sheets. All children were given Gezira formula by nasogastric tube. All children were followed up by every other day weighing and daily monitoring of their general condition including heart and respiratory rates temperature. Initial formula with 1 gm protein and 70 kcal per 100 ml are give till signs of recovery occur, then maintenance formula with 3 gm protein and 130 kcal /100 ml is given till their weight reach or approximates 85% of the standards.

Total numbers of children was 351, 7 children were excluded because their age was more than 5 years. 85% of children recovered and 10.8% died. The formula was found to be effective even in treatment of very sever cases. The mean duration of stay in hospital was 13.5 day. The rate weight gain was 28.4 grams/day/person. These results are



comparable to international standards

Adaptation and a unified approach to treatment of PEM is suggested as WHO formula ingredients are not very available especially in remote rural hospital. The treatment protocol used is in total agreement with the WHO guidelines.



Neonatal Outcome in Severe Malaria with Pregnancy

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Pregnant women are more vulnerable to malaria because of changes in the immune system during pregnancy. It known that malaria infection during pregnancy, induce a potentially harmful response, in the placenta and the foetus. This study designed to determine the outcome of the neonates in cases of severe malaria. One hundred fifty eight cases observed during acute malarial attack proved by positive parasite in peripheral blood film with severe parasitaemia in different time in their third trimester. This observation depends on different parameters studied here the most important of which is the biophysical profiles by ultra sonogram.

Neonatal outcomes were: eighteen stillborn (11%). Sixty one low birth weight (38%). Forty seven with low Apgar score (29%). Thirty eight born prematurely (24%), eight of them, ended in early neonatal death.

Further multi-central studies with advanced measures are recommended to study the foetal response during acute attack of malaria.

Neural Tube Defects: Incidence, Pattern and Short-Term Outcome In Omdurman Maternity Hospital, Sudan

Dr. Ghada Eltahir and Prof. Salah Ahmed Ibrahim

In the developed countries a great improvement had occurred in the management of childhood illnesses which made the congenital diseases a major cause of infant morbidity and mortality, neural tube defects being one of them. In the last two decades a great effort had been done on NTDs leading to reduction in their incidence.

The objectives of this prospective hospital-based study were to: determine the incidence of NTDs in Omdurman Maternity Hospital, describe the spectrum of NTDs, detect any associated congenital anomalies, assess the role of the socio-demographic factors and to study the short term outcome of NTDs.

All babies born in Omdurman Maternity Hospital during the period from the first of February 2003 to the 31 first of January 2004 with clinically detectable NTDs were examined and a consecutive birth was taken as a control .The surviving cases were followed up for the following three months.

The incidence of NTDs was 3.48/1000, 50% of the cases were myelomeningocele, 38% were anencephaly, 10% were encephalocele and one case was iniencephaly. Most of cases were either stillborn or died within the neonatal period. The male to female ratio was 1:5, 20% of the NTDs had other congenital anomalies. About 55.5% of the mothers were less than 25 years of age and there was a significant association between NTDs and mother age (relative risk 2.3p<0.0001). Most of the parents of NTDs had poor educational background, 54.8% of mothers had a significant history of previous stillbirth delivery .Only 30% of mothers had antenatal care. No mothers from the case or control group had used folic acid pre-conception.

It is concluded that the incidence of NTDs in Omdurman Maternity Hospital is the highest in Africa and this invites a nationwide registry for all congenital anomalies and improvement in obstetric services including active promotion of folic acid supplementation programs.



Sample Evaluation of Medical Schools in Sudan

College Of Medicine, University of Juba

Walyeldin El-Nour El-Fakey, MD, Assistant Professor U of J, Nour Elhuda Attalla, MD Assistant Professor U of J, Mohamed Essa, PHD, Assistant Professor U of J, Mohamed Yousif Sukar, Ph. D., Professor U of K, Abdelrahman H. Elmufiti, MRCP, DCH, Professor U of J.

In this study the world federation of medical education standards are used to evaluate the curriculum, educational program and available resources in collage of medicine university of Juba.

To assess the curriculum and effectiveness of methods used in teaching, and to study if the educational programme and the staff meets the basic and developed standards of medical education. More over this study shows the strong aspects to be encouraged and the weak points.

Cross sectional analysis of available data testing the World Federation of Medical Education standards.

Data collected form documents available at the university and collage, questionnaire to the staff and students and interviews with department heads.

As for the basic aspects of the standards collage of medicine, university of Juba scored a general average of (81.3%). The weakest aspects here are those which concern the availability of full time technicians at hospital, patients care and mechanisms of program evaluation.

As for the developed aspects of the standards, the Collage of Medicine of the University of Juba scored a general average of (60%). The weakest points here are full time technicians at hospital; patients care potential educational resources and mechanisms of program evaluation.

The curriculum and availability of resources at the collage of Medicine University of Juba are acceptable but not to the level of what stated in the collage mission and objectives.

Key words: standards, education, medical, method, basic standards developed standards, World Federation of Medical Education.

Echocardiographic Findings in Sudanese Children at Ahmed Gasim Centre

Dr. Siham Ahmed Hassab Elrasoul

*Cons passed Cardiologist, Ahmed Gasim Cardiac Centre
(MD, MRCP, MRCPCH, DIP PAED CARDIOLOGY, BCH)*

The aim of the study is to describe the pattern of heart disease both congenital and acquired in Sudanese children attending the paediatric cardiology clinic at a Gasim Cardiac Centre.

The study is a cross-sectional study involving three hundred children age -0-15 yrs, attending the clinic at a Gasim Hospital. The study duration is from December 2004 – May 2005.

The study showed that the predominant cardiac disease is rheumatic heart disease. Commonest rheumatic cardiac lesion was mitral regurgitation. Among the congenital heart VSB was the most predominant.

Sudan, being an underdeveloped country, still has a predominance of rheumatic heart disease which is a major cause of morbidity and mortality in children. The cost of cardiac surgery is an added obstacle in the treatment of children with heart disease whether rheumatic or congenital. The implementation of a proper rheumatic fever control program and increasing the awareness of the population for seeking medical advice for these children is extremely essential and is the corner stone for reducing morbidity and mortality. Governmental fund to support rheumatic fever control program as well as supporting cardiac surgery for children is extremely essential.



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Reference:

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Child Health in South Sudan: Previous Experience and Future Prospects

Patterns of Paediatric Mortality in Juba

Prof. Mabyou Mustafa Abdel Wahab

Out of a total number of 7092 admissions at Sabbah Children's Hospital, Juba, Sudan, in the period between June 1984 and May 1986; 675 (9.5%) died of whom 55.4% were males and 44.6 % were females. 53 % of those who died were under 1 year of age and 92.6 % were below five years of age.

The main causes of death were identified as gastroenteritis, respiratory infection, measles, and tetanus, which together accounted for 58.4 % of all the deaths. Malnutrition, especially the sever forms of kwashiorkor, marasmus-kwashiorkor, and marasmus accounted for 13.2 %.

Malaria and central nervous system disorders accounted for 7.7 % and 7.9 % respectively.

Tetanus was rampant. It alone accounted for 16 % of all the deaths. Tetanus neonatorum accounted for 87 % of the cases of tetanus. 73 % of all the deaths occurring in the neonatal period were due to tetanus neonatorum.

Health education, activation of the expanded programme on Immunization and other preventive measures should be embarked on. People should be enlightened about the importance of early reporting to medical care so as to reduce childhood mortality in the Juba are.

Post war strategies for child survival should reinforce and stress on the following:

1. Maternal and child health programs.
2. Health education programs.
3. Good obstetric care.
4. Control of infectious disease.

These should be coupled with:-

1. Rehabilitation of the existing health facilities.
2. Establish children hosp. in Wau, Malakal & other main cities in Southern Sudan.
3. Embark on in-service training of staff dealing with child health.
4. Southern Medical Schools should go back to function in the south.
5. Strengthen the PHC programs and make them efficient.

Patterns of Severe Malaria in Sudanese Children

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Nowary K4, Hashim F5, Erikson B6**

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2Assistant Professor, Paediatrician, University of Islamia

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4Paediatrician, Gedarif Hospital

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The objective of this study was to assess treatment actions before admission for severe malaria, epidemiology, clinical presentation, disease management, outcome and risk factors associated with fatality.

Follow up prospective design was used to fulfil the objectives of the study that took place in four hospitals: Omdurman Paediatrics hospital located in the capital (Khartoum) Compared to Medani, Gedarif and Sennar hospitals located in other states.

Total admission of severe malaria was 543 children; it represented 21% of all paediatric admission, and 12% of malaria outpatient cases. Median age of children with severe malaria was 48 months. 93% of children with severe malaria died before the age of 9 years. Treatment at home was the first action taken by families before hospitalization (58%), majority of actions (75%) were done by mothers. Health services at local level were available only for 34% of the largest groups. Cerebral malaria judged by convulsion and coma (83%) was the commonest complication; it had significantly different distribution in different states i.e. with different epidemiological context.

Case fatality rate was 26/1000. Risk of dying because of delay was four more times compared to children without delay, 95% CI (1.5 – 14.3). Highest risk of death was associated with delay in seeking treatment and severity of the illness before admission (coma, inability to sit or eat and hyperpyrexia).

Omdurman hospital in Khartoum state (the capital) witnessed the highest case management performance index compared to other states hospitals.

In view of this, we conclude that malaria could be reduced by improving peripheral health facilities, train mothers on malaria home management and providing appropriate education to communities to avoid delay in seeking treatment. Malaria control strategy should consider the different epidemiological contexts in different states in Sudan.

Balloon Valvuloplasty for Critical Neonatal Aortic Stenosis: Initial Results and Long Term Follow-up

O. H. EL Shazali, J. J. O'Sullivan, D. S. Crossland

Paediatric Cardiology, Freeman Hospital, Newcastle upon Tyne, UK

The purpose of this study is to assess the safety and effectiveness of aortic valve ballooning for critical neonatal aortic stenosis and to look at intermediate and long term follow up.

The study is a retrospective review of notes, echocardiograms and haemodynamic data of all babies (less than 3 months of age), treated at our institution between August 1985 and December 2002.

28 babies underwent balloon valvuloplasty for critical aortic stenosis, mean age was 25 days (range 1-89), mean weight was 3.3 Kg (range 2.1 - 5.6), mean follow up period was 6.3 years (range 0.5 - 16 years).

There were 7 deaths (25%), all of them occurred within 4 weeks post ballooning, 3 of them had severe heart failure and were ventilated and on inotropic support with evidence of multi-organ failure pre-ballooning. There was no death within the last 5 years.

8 babies developed significant aortic regurgitation and 12 babies had significant residual aortic stenosis and 2 of them needed re-ballooning, one at 1 year of age and the second one at 2 years of age.

4 patients underwent Ross procedure at 4, 9, 10, 10 years of age.

Conclusion: Ballooning of neonatal critical aortic stenosis is associated with significant mortality and morbidity especially in very sick neonates, patients should have regular and long term follow up.



Audit of Management of Sickle Cell Crises In Children in a London Hospital

Dr. Abdelmoniem Mohamed Hamid, MBBS, MRCPCH.

Consultant Paediatrician, Kettering General Hospital, Kettering, UK

Africa is the birthplace of sickle cell disease with millions with sickle cell trait, and newborns affected by sickle cell disease (SCD) are estimated at 200,000 per year. The disease is also prevalent in variable degrees in other parts of the world including UK, USA, the Caribbean, the Mediterranean, Saudi Arabia and India. There are about 10000 in UK. Whereas management of children with SCD in the developed world is well structured and organised by protocols and close follow up, it is lacking behind in Africa.

Aims: To evaluate the management of acute sickle cell crises in children attending a London Hospital in line with the available hospital guidelines.

Methods: An Audit of the care provided was done by retrospective data collection from case notes of 43 Children aged 0- 16yrs, presenting with acute sickle cell crises to the London Hospital over 5years period (between April 96 to April 2001). There were 25 males (58%) and 18 females (42%). A questionnaire was completed.

There were 24 (56%) Black-Africans in the studied group. Black Caribbean's were 6 (14%).77% of the cases were HbSS whereas HbSC represented 23%. Out of 125 presentations 120 (96%) were on prophylactic penicillin at presentation. Pneumococcal vaccine had been received by 24(56%) of the patients. 17 children (40%) did not receive the vaccine. With reference to the national standards, there was delay in initiating analgesia, and a long wait before a doctor saw those children attending A&E. The most common diagnosis was vaso-occlusive (painful) crisis in 89 presentations (72%). Septicaemia occurred in 8 presentations (6%), pneumonia in 8 (6%) and sickle chest syndrome in 8 (6%). Hb on presentation was within normal range (for the patient (<1gm drop) in 102 (85%) cases and low in 16(13%).Blood transfusion was required only in 12 (10%) of admitted children.

The overall management of children with acute sickle cell crises presenting to the London Hospital had been good, but some aspects of management need improvement. There was delay in initiating management when children attended Hospital with crises. The majority of children were receiving prophylactic penicillin and there was low rate of severe infections. Though many had had pneumococcal vaccine, but there was no organized programme to immunize all.

Management of sickle cell disease in children in Africa and other developing countries needs to be revisited. More epidemiological studies and research are needed, besides implementation of structured management protocols to reduce morbidity and mortality in these children.



Medical and Psychosocial Aspects of Children in Reformatories

Sanaa Kalid Mukhtar

This study is a descriptive, prospective institutional based study, comprised of 120 detained children in Kober and Elgeraif reformatories. The study was conducted from July 2003 to January 2004. The Objectives of this study were to detect the common



medical problems, to assess the psychosocial profile and to identify factors associated with offending.

Self administered ISAAC questionnaires with supplemented question on socio-demographic data, drug history (substance abuse); features of both medical and psychiatric problems were included.

Detailed information about the offence was stated. Another questionnaire; strength and difficulties questionnaire which is a behavioural screening covering items on psychosocial attributes has also been administered. Complete physical examination was recorded.

The age of the detained children ranged from 10-17 years. There was obvious male predominance in the study. The majority of children belong to Fur (49%), Nilotics (26%) and Gaaleen (17%) tribes. Most of the parents were from states other than Khartoum (61%). The majority of the children belong to low social classes (94.2%). The main reasons for placement were condemnation (43.3%) which was mainly due to financial causes (27.9%).

The most common health problem was substance /alcohol abuse which was reported in (54.1%), followed by dermatological conditions which accounted for (30.8%). Intestinal parasitism was reported by (11.6%). Enuresis was found in (11.6%), schistosomiasis affected (6.1%) and upper respiratory tract infections which were suffered by (6.7%). The prevalence of HBV was (4.9%). Psychiatric disorders were diagnosed in (40%) which were mainly conduct disorders (33.3%), with an overlapping between different types of psychiatric disorders. Being an offender was significantly (P . value < 0.000) affected by the state of poverty; however, it was not affected by the state of being from very large families, other offender in the family, poor education or repeated offending.

It is concluded that the common health problems are substance/alcohol abuse, dermatological problems and intestinal parasitism.

Psychiatric disorders were diagnosed in 40% of the children with conduct disorders (83.3%) being the most common.

Being an offender is significantly affected by the state of poverty (P . value < 0.000).

Update in Paediatric Hypertension

Hypertension is one of the major contributors to cardiovascular, renal and central nervous system morbidity and mortality.

Although it is more prevalent in the adult population, hypertension and its complications are being seen in the paediatric population with increasing frequency.

Hypertension is usually asymptomatic in children; so routine BP measurement as part of the general examination is vital in preventing later mortality and morbidity.

Measuring blood pressure in childhood can also identify people who will develop hypertension later in life.

In this presentation we will discuss

- Epidemiology
- Measuring Blood pressure
- Diagnosis
- Investigation
- Management



MR Imaging of Spinal Dysraphism

Mamdouh Mahfouz, MD

Congenital anomalies of the spine are collectively included under the title of spinal dysraphism.

This presentation will try to cover the diagnostic role of MR imaging in the assessment of different lesions encountered in this domain.

Meningeal abnormalities as well as spinal cord lesions will be demonstrated and discussed.

A diagnostic protocol will also be recommended by the end of the presentation.

Patterns of Childhood Epilepsy in the Eastern Province in Saudi Arabia

Dr. El Sayed Ali, FRCPI, DCH, Dip Neur (Lond)

Consultant Paediatric Neurologist

King Fahd Military Medical Complex (KFMMC)

Objective

To determine the distribution of various epilepsies and epileptic syndromes in Saudi children treated in King Fahd Military Medical Complex in Dhahran. An epilepsy Clinic was set up in 1999 for all children with a history of seizures or epilepsy, referred from within KFMMC hospital, Air Base Hospital in Dhahran, Naval Base Hospital in Jubail and Security Forces Dispensary in Dammam.

Method

Data concerning 300 children aged 2 months to 14 years with epilepsy seen between August 1999 and September 2004 were analyzed using the International League against Epilepsy (ILEA) classification. Nicolet Alliance Works 23 Channel Digital EEG machine with Video Recording was used.

Results

A total of 300 children were recruited into the study. The median age at the time of first seizure was about 5 years. 49% were male. In this childhood – onset cohort, 46.6% of the syndromes were localization related. 30.3% generalized, and 23.1% undetermined as to whether focal or generalized. Benign Rolandic and Occipital epilepsies occurred in 12% of partial epilepsies. Myoclonic epilepsies of various types are the leading cause of generalized epilepsy. Childhood absence epilepsy was the most common syndrome in primary generalized epilepsy. Infantile spasms were the commonest in the secondary seizure group. Neuroimaging was performed in all patients with partial epilepsies and epileptic encephalopathy.

The most common treatment strategy for generalized epilepsies was initial Valoprate monotherapy. In partial epilepsies, Carbamezepine was the drug of first choice. The new AEDs (Lamotrigine and Topiramate) were used as second therapeutic mode, either as monotherapy or add – on. Infantile spasm cases were treated initially with Vigabatrin.

Conclusion

This study presents a description of childhood and adolescent onset epilepsy as it is diagnosed and managed in our hospital.

The Role of the Paediatric Diabetes Specialist Nurse

Dr. Asaad T. El-Abbas (El-Srurabi),

MBBS, MMS, MRCP + DCH

Consultant Paediatrician, Mayo General Hospital,

Castlebar, Co. Mayo, Ireland

- * Diabetes is the commonest endocrine disorder of childhood, and is a life long chronic condition.
- * 20,000 people under the age of 20 years with diabetes in the UK
- * The incidence of diabetes in childhood is increasing, and the onset is occurring at a younger age.
- * The demand for Paediatric Diabetes Specialist Nurses is likely to continue in future years.
- * PDSN is the hub of the Diabetes team.

In order to provide and deliver a high quality paediatrics diabetes services PDSNS+ along with other team members need to consider certain priorities:

1. Having a clear philosophy for team approach.
2. Having guidelines of practice for the clinic and in-patient unit.
3. Promoting ongoing education involving:
 - the child / family
 - other health professionals in the hospital or community settings.
4. Facilitating and co-ordinating effective care.
5. Taking responsibility for personal development needs.
6. Monitoring the service offered by audit, i.e. by measuring the efficiency, effectiveness and economics of the service according to resources available.

Background and History:

- * The first nurses with specific responsibility for patients with Diabetes were investigated in the early 1950's in Leicester, known as "Diabetes Liaison Health Visitors".
- * The first posts were developed in 1970.
- * Nurse practitioners developed in America in the 1970 and subsequently evolved into specialist nurse educators.
- * In Australia the first paediatric diabetes education was appointed in 1978.
- * In France they are all hospital based.
- * In Sweden Doctors and Dietician's are the major educators.

Summary and Conclusions:

The role of the PDSN is varied and at times complex. The following attempts to list the principal elements:-

1. Clinical Care.
2. Liaison with:
 - School
 - Primary Health Care Teams
 - Employers
3. Teaching
 - Children and Parents
 - General Practitioners study day
 - Nurses
 - Ward staff up date
 - Teachers
4. Advocacy and counselling
5. Organisational skills.



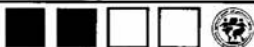
Clinical and Echocardiographic Features of Ebstein Anomaly in Sudanese Patients, High Prevalence and Unreported Associations

Sulafa KM Ali, Nuha A Alnumairi

Sudan Heart Centre

Ebstein anomaly (EA) of the tricuspid valve is a rare congenital heart disease that constitutes about 0.5% of all congenital heart disease. This study is a prospective follow up of all patients with EA seen at two cardiology clinics (Sudan Heart Centre and Jafaar Ibn Ouf Children's Hospital) from July 2004 to March 2005. Diagnosis of EA was based on the echocardiographic demonstration of apical displacement of the septal leaflet of the tricuspid valve by $> 8\text{mm/m}^2$ with abnormal attachment of the septal leaflet to the interventricular septum.

Results: In a 9 months period we identified 13 patients satisfying the criteria for EA. EA constituted 1.2 % of all patients with congenital heart disease. The age ranged from 2 weeks to 35 years with a mean of 12 years. Five patients (38%) were asymptomatic. Seven patients (53%) presented with CHF, 4 were in NYHA class III-IV and 3 were



in class II. 4 patients (30%) presented with cyanosis in addition to heart failure. One patient presented with palpitations.

A wide range of associated diseases included chronic renal failure, impaired hearing, and growth failure with a characteristic facial appearance in males. Electrocardiographic abnormalities included peak, tall P wave (83%), Rsr pattern, first degree AV block, atrial fibrillation, Wolf-Parkinson-White (WPW) and Mahaim type pre excitation. Associated echocardiographic abnormalities included mitral valve prolapse, left ventricle dysfunction, secundum atrial septal defect (ASD), pulmonary valve stenosis and pericardial effusion. One patient had tricuspid valve surgery and 3 are waiting for surgery. 2 patients are awaiting trans-catheter ASD closure.

Conclusion: The frequency of EA in this area (1.2 % of all congenital heart defects) is more than double the average reported frequency. Many of associated diseases had not been reported in the literature.



Enuresis Clinic

Dr. Abdelazim Mohamed Mabrouk,

MBBS, MPCH, DCH, CABP

Specialist Paediatrician, Al Ain, United Arab Emirates

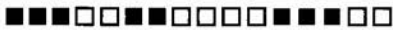
Enuresis is defined as the involuntary voiding at an age where urinary continence is expected. It can be primary, secondary, nocturnal, diurnal, poly or monosymptomatic.

The commonest type is the primary monosymptomatic nocturnal enuresis. This is defined as a complaint of bed wetting since birth and occurring during sleep without any periods of dryness in a child older than 5 to 6 years. It is not associated with symptoms of urgency, frequency or day time wetting. This represents more than 80% of cases. Numerous hypotheses had been suggested to explain the aetiology of this distressing problem. The most acceptable one is the genetic predisposition where Nocturnal enuresis was observed to run in families. Recently, the gene locus was identified to be in chromosome 13q and an autosomal co-dominant mode was suggested. In those children there was a lack of nocturnal secretion of the antidiuretic hormone vasopressin, resulting in large urine production at night. Children with overactive small bladder capacity void small quantities of urine at intervals during the night.

It was preferred that these children should be managed in a specialized enuresis clinic. This clinic provides evaluation and management for affected children who are above the age of six years. It adopts different management approaches including motivational therapy, behavioural modification and pharmacological treatment. It also provides in-

formation to parents and children and helps them to understand the problem, reinforce the positive behaviour and discourage the negative one, and to become involved in the effort to alter night time routines. The clinic should be run by a Paediatrician with special interest in treating enuretic children, and a specialist nurse who had adequate training and experience in the subject.

The presentation will include the experience and statistics of the enuresis clinic in Al Ain, United Arab Emirates, Also, a plan of management which can be a model to follow in dealing with these children will be suggested.



Evidence for Management of Babies Born to Mothers with Hepatitis C Infection

Dr. Abushouk

Hepatitis C Infection is a common disease. The number of children acquiring the disease transplacentally is increasing. There are few guidelines on how to manage these patients, however there is a wide variation in clinical practice.

Methods: Extensive literature review including 119 references looking for the evidence on how to monitor such babies.

Results: there is little evidence on how to monitor this group of babies.

Conclusion: Large studies are needed to answer several questions on how and when to test these babies and how to interpret the results.

The Pattern of Childhood Cancer In Children Admitted to the Institute of Nuclear Medicine, Molecular Biology and Oncology-Wad Medani

Dr. Huda Haroun

Introduction:

Reports on the pattern and incidence of childhood cancer in Sudan are rare. Although cancer in children remains one of the major causes of death due to diseases between the ages of 1_15 years, the pattern in Sudan is still not yet determined, the incidence is not known.

Objective:

the objective of this study is to know the trend of cancer in Gezira which can give a hint to the trend in Sudan and compare it the international pattern.

Method:

The study is a retrospective study using the institute registration. A total of 190 children aged less than 15 years diagnosed by means of histological or cytological examinations during the period May1999_Dec2004.

Results:

The result showed a trend like an afro-asian rather a western pattern .with male to female ratio of (1.8:1} .with lymphomas constituted the highest prevalence(42.8%) followed by acute leukaemia (23.7%) and kidney tumors (12.8%) .With kidney tumor and retinblastoma common in under five and lymphomas, leukemias and bone tumor more prevailing at the age group more than five years. Lymphomas leukaemia and kidney tumor are more common in males than females.

There is no specific cancer which is more prevalent in certain tribe or area in the Gezira.

Recommendations:

we need to know the percentage of deaths the incidence yearly the degree of survival

The Importance of EEG for the Paediatrician

Dr. Taha Sadig Ahmed

MBBS (Khartoum), PhD (Bristol, UK), Member of (ANEM),

Associate Professor, College of Medicine,

Consultant, Clinical Neurophysiology, King Abdulaziz University Hospital, King Saud University, Riyadh

The EEG, in general, is important for (1) confirming and documenting whether there is a brain abnormality or not. For example in cases of sudden movements, myoclonus or startles, especially in the very young, the physician and parents need to ascertain whether these are normal movements (normal EEG) or are part of a subtle seizure (abnormal EEG) (2) Identifying whether the abnormality is focal, lateralized or generalized (3) This will help in classification, which sheds light on the appropriate medication, and (4) tells about the prognosis. (5) Serial, follow-up EEGs tell the Physician about whether there is improvement, deterioration or evolution of the epilepsy (6) EEG is important for identification of other neurological conditions such as HSE, SSPE, etc. (7) Study of sleep disorders, and confirming whether they are part of normal phenomena or related to subtle seizures (8) Help in Child Psychiatry and differentiating between genuine seizures and pseudo seizures. Sleep studies,

The Paediatric EEG differs from adult EEG because the electrical activity of the brain changes with cerebral maturational changes during growth and development. EEG maturational changes were first reported as early as the 1930s by Smith (1938) and Lindley (1939). However, the major studies took place much later (e.g. Matousek, 1968; Mathis et al, 1980; Gasser et al., 1988, Clarke et al 2001). Beside the age-specific developmental physiological changes in the EEG, children develop different pathological conditions that are different from adults and are often also age-specific. Interestingly, several researchers (e.g., Mathis et al., 1980; Benninger et al., 1984; Harmony et al., 1990; Diaz et al 1998) report differences in EEG maturational features between boys and girls. The EEG recording itself is different in children than adults because the brain, meninges, skull, scalp, head size as well as the child's behaviour and ability to cooperate all change over time. Therefore, Paediatric EEGs must be recorded and interpreted bearing in mind normal as well as abnormal features for each age, from the newborn to adolescence. The Paediatric EEG, its own normalities, curiosities and abnormalities will be discussed, and most of the data will be from our clinic in King Abdulaziz University Hospital, Riyadh, Kingdom of Saudi Arabia.



Pattern of Valvular Involvement in Rheumatic Heart Disease

Samia Hassan

Rheumatic heart disease remains a leading cause for morbidity and mortality from cardiac diseases in Sudan. The objectives of this study were to describe the pattern of valvular involvement in patients with RHD, correlate the pattern of valvular involvement to the course of the disease and study the correlation between the social impact on the child and family to the pattern and severity of the valvular lesion.

A cross – sectional hospital based study was conducted on three days a week basis from the period of 24th of June to 24th of November 2003 in Ahmed Gasim Teaching Hospital and Al Shaab Teaching Hospital. One hundred cases with documented RHD were studied; full history, thorough examination and Doppler echocardiography were done for each child. The result showed that RHD was confined mainly to rural and peri-urban areas (in 94% of cases), with poor housing conditions and overcrowding. The number of persons/room was 6-15 in nearly two thirds of the cases.

Most of the cases (93%) had mitral valve involvement : in form of MR in 36 cases, MS in nine cases, MR + AR in 23 cases, MR + MS in 15 cases, MR + MS + AR + AS in eight cases and MS + AS in two cases. There was no significant relationship between history of rheumatic fever and the severity of valvular involvement ($P=0.202$), while there was strong association between irregularity in prophylaxis and development of complications like pulmonary hypertension ($P<0.001$) and significant haemodynamic changes on the heart.

Almost half of the cases (51%) had either pulmonary hypertension, severe lesions and significant haemodynamic changes on the heart, putting them as candidates for surgery with the hazards of complications of prosthetic valves in such a group of children living away from sophisticated medical services.

There was a significant burden on the families and their children as almost all the families (98%) were affected by the money spent on treating their children and two thirds of children had limited activities at home and school.

We recommend improvement of housing conditions, early detection of cases with RHD and regular use of prophylaxis as it might be the only intervention that could be realistically implemented and cost effective.

Paediatric Tuberculosis: Diagnosis and Treatment

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Tuberculosis is one of the major infections affecting children worldwide. It causes significant morbidity and mortality, especially in infants and young children. Recently, there has been a global increase of tuberculosis in both resource-limited and some resource-rich countries. HIV infection, overcrowding, poverty and immigration are possible contributory factors for such increase. At present, there are 2 billion individuals infected with the organism, and 1.8 million people die each year.

The diagnosis of tuberculosis in children can be difficult as traditional investigations may not always be positive. This paper discusses the epidemiology, diagnosis (old as well as newer diagnostic methods) and treatment of the disease in children, including treatment of latent infection and chemoprophylaxis of household contacts. The paper also highlights the new vaccines currently in development.



IVF Babies

Dr. Zeinab Mohammed Gaily

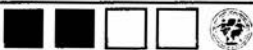
Prof. Zein El Abdeen A/Rahim Karrar

Department of Paediatrics and Child Health

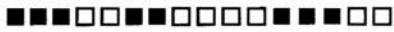
University of Khartoum

This is a prospective hospital based comparative study in Sudan including 96 IVF babies.

The most important objectives of this study include assessment of birth parameters of IVF babies, common medical problems among them during the neonatal period, incidence of multiple births and congenital malformations among them. It also addressed the psychosocial impact on the mothers.



It demonstrated that IVF babies had lower birth weight compared to normal conception babies and confirmed that IVF babies had high incidence of multiple birth. The incidence of congenital malformations was equal in both groups. The common medical problems were due to prematurity rather than the IVF method itself. The mothers in this study had an increase in their self-esteem, their relation with their husbands became more intimate and also with their families and neighbours. The majority of the mothers refused to declare the society about their IVF baby.



Guidelines for echocardiography

Elfatih Abozied

Echocardiography is the most useful diagnostic tool in cardiology due to its wide availability, non-invasiveness, the vast information it provides, cost effectiveness and reliability. In spite of all that this modality is utilised indiscriminately.

In advanced countries indication guidelines were made for requests of echocardiography.

Review of the requests in 3 clinics for paediatric cardiology in Khartoum from May2001 to April 2005 revealed a sizeable number of requests which can be classified as inappropriate.

In Sudan this investigation is still expensive and time consuming. Many requests are made by junior staff where a senior staff may save the patient the trouble.

The paper discussed a draft proposal for local guidelines for ECG requests.

Acute Flaccid Paralysis Presenting at Children Emergency Hospital, Port Sudan, 2004

Khalid Mohamed Khair,

MBBS

Red Sea State is one of the least developed in the whole Sudan. According to (1999) estimates its population is (735,800). Children under five are 138,183. Below one year of age estimate (22,074).

The data had been collected over one year period when AFP became a major health problem in 2004 among children under five of age.

Total number of AFP was 65 established acute poliomyelitis were 23 cases representing (35.5%) of total AFP admission. Vaccination status of the study group, (56.9%) were not immunized while (12.3%) were partially vaccinated indicate poor vaccine coverage in the state.

Only (3%)

of the study group attended more than 6 rounds of NIDS. (64.6%) attended less than 3 rounds.

There was male predominance (1:1.2), (32.3 %) of the cases were between 12-24 months. However, attack rate was lower (16.9%) among infant below one year. Above 5 years of age represent only (9.2%) of affected children.

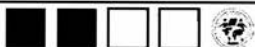
The onset of paralysis prior to admission is shorter in this study (35.3%) had paralysis only between 1-3 days. Only (1.5%) presented after 2 weeks from onset of the paralysis.

Stool for viral study showed (33%) were type 1 polio virus , (1.5 %) showed type 2 . only (3%) were non-polioenterovirus .

Flaccid paraplegia is a predominant clinical feature (56%). Respiratory and CNS involvements reported in (3%) of cases. only (41%) remain with residual paralysis after 60 days of clinical assessment.

Full recovery was achieved in (53%), acute myositis cases were (3%), hypokalemia (4.5%), Gillian Barre Syndrome were (6%), and cerebral malaria were (3%).

Mortality was (3%) due to acute respiratory paralysis.



A Clinical Governance Model: A Recipe for Change to Better Practice

Dr. Hadi Almalik

In attempt to improve the Patient care and work towards clinical excellence, there is a lot of initiative taken up by developed countries.

Clinical Governance and variance methods to implement it are one of the best of these initiatives. Thinking with open mind and a vision to the future we need to look to others experiences and learn from them.

Clinical governance defined as: “A framework through which Health organizations are accountable for continually improving the quality of their services and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish”

It works through the following Main Pillars:

- Evidence Based Paediatrics
- Professional Development
- Clinical Audit
- Clinical Risk Management
- Clinical Information
- Clinical Guidelines

The RAID (Review, Agree, Implement and Demonstrate) Model is an ideal one for applying and supporting the Clinical Governance Agenda in the clinical as well as operational aspects of the child and his family Care. That can be carried out through a small team in each hospital, Can be called Clinical Governance Support group. It is very effective way to overcome the Challenge of Change towards the best care of our children services in Sudan.

Dengue Haemorrhagic Fever in Port Sudan Locality

Dr. Amel Aziz Malik, MD. (Paediatrics)

Head Dept. of Paediatrics, Faculty of Medicine, University of Red Sea

Dengue is the most important emerging tropical viral disease of humans in the world today. It is a mosquito born disease transmitted by *Aedes aegypti*. WHO(1999) estimated that there are 2.5 billions of population worldwide are at risk of contracting the dengue fever where 50 to 100 million cases of dengue fever(DF)and about500,000 cases of dengue hemorrhagic fever (DHF) each year which require hospitalization. Since 1967 DF has been reported in Sudan (WHO 1997), DF type 2(not DHF) was diagnosed virologically in Port Sudan locality in 1986 and 2003. Objectives: To study the pattern of emerging DHF in Port Sudan.

This study was conducted in Port Sudan Paediatric Hospital and SPC Hospital in the period 1/11/2004 - 30/6/2005. Most of the cases of suspected DHF according to WHO criteria (Excluding tourniquet test) were included in this study.

Data were collected from 307 cases of suspected DHF 188(61.2%) male and 119(38.8%) female between the age5-month to 15 years. [Mean age 7.5 years old].

Clinically all cases in our sample presented with fever [100%] of 4-7 days duration, (68%) presented with easy bruising and bleeding at vein puncture site and/or petechiae in skin, mucous membrane and bleeding from other sites,(33.2%)with epistaxis, (36.5%) with haematemesis and (27%) malena. Dengue shock syndrome (DSS) was diagnosed in 32 cases (9.1%).The mortality rate was (2.2%).

Platelets count was done in 280 pt thrombocytopenia (platelets 100,000 cells/cu mm or less)found in (69.5%) of them , u/s abdomen was done to 36 cases and 16 patient have pleural effusion and/or ascites .Sample for serological test were collected from 82 cases and 35 samples were discarded due to haemolysis. Dengue IgM antibodies were detected in 37 cases, 10 undetected (possibly due to inappropriate time of sample collection).

Preventive measures should include community participation, environmental management of the vector control tools, education of health personnel and improvement of laboratory facilities.



Case report

Dyskeratosis congenita (DC) in a Saudi boy: an uncommon genodermatosis

I. Y. Saadeldin, Satti A. Satti, Ali S. Dammas

Pediatric & Neonatology Department, King Fahad Hospital at Al-Baha, Al-Baha, Saudi Arabia.

Abstract

A 6-year-old Saudi boy presented to our hospital with severe thrombocytopenia. The patient was managed for a long time (6 years) as having chronic idiopathic thrombocytopenic purpura. Later on features consistent with dyskeratosis congenita were recognized by the authors. The main features were: skin manifestations, nail dystrophy, alopecia totalis, microcephaly and mental retardation. The condition was associated with acute necrotizing ulcerative gingivitis. At the age of 10, he developed pancytopenia and died at the age of 14 years from acute fulminant sepsis.

Key words

Dyskeratosis congenita, acute necrotizing ulcerative gingivitis, pancytopenia.

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Engerix™-B is available in dose forms containing 10 µg or 20 µg of HBsAg per dose. These are recommended for children and adults, respectively. The relatively large amounts of HBsAg in each dose have been shown to provide protection more rapidly and longer-lasting persistence of protective levels of antibodies from HBV for normal individuals than lower doses. Equally, the recommended doses of Engerix™-B are beneficial for those individuals with a poor immune response (non-responders) due to a variety of factors, including older age, male gender, obesity and smoking.

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ZENTEL (albendazole)

Prescribing Information

PRESENTATION

Zentel is available in tablet and suspension forms with 400 mg or 200 mg Albendazole tablets and 4% or 2% Albendazole in suspension.

USES

Zentel is effective against the intestinal protozoal parasite *Giardia lamblia* (*intestinalis* or *duodenalis*).

Zentel is also a broad spectrum anthelmintic for the treatment of:

<i>Enterobius vermicularis</i>	Pinworm or threadworm
<i>Trichuris trichiura</i>	Whipworm
<i>Ascaris lumbricoides</i>	Large roundworm
<i>Ancylostoma duodenale</i>	Hookworm
<i>Necator americanus</i>	Hookworm
<i>Strongyloides stercoralis</i>	
<i>Hymenolepis nana</i>	
<i>Taenia spp.</i>	Tapeworm

in single or mixed manifestations of any of the above.

Albendazole may also be used for systemic helminth infections: the appropriate data sheet should be consulted when treating hydatid disease, cysticercosis and other systemic infections.

DOSAGE AND ADMINISTRATION

Under medical prescription

In cases of giardiasis: Zentel 400 mg as a single daily dose should be given for 5 days.

In cases of *Enterobius vermicularis*, *Trichuris trichiura*, *Ascaris lumbricoides*, *Ancylostoma duodenale* and *Necator americanus* the usual dose in both adults and children over 2 years of age is: 400mg (two 200 mg Zentel tablets or 10 or 20 ml (400 mg) of Zentel suspension) as a single dose.

Usual dose in children 1–2 years of age: 200 mg (one 200 mg Zentel tablet or 5 or 10 ml of Zentel suspension) as a single dose.

In cases of suspected or confirmed Strongyloidiasis, Taeniasis or *Hymenolepis nana* infestation, Zentel 400 mg once daily should be given for 3 consecutive days. In cases of proven *Hymenolepis nana* infestation, retreatment in 10–21 days is recommended.

If the patient is not cured on follow-up after 3 weeks, a second course of treatment is indicated.

The tablets may be chewed, swallowed or crushed and they should be taken with food. No specific procedures, such as fasting or purging, are required.

CONTRA-INDICATIONS, WARNINGS, ETC Cautions

Use in pregnancy: Because albendazole was found to be embryotoxic and teratogenic in the rat and rabbit, its use is contra-indicated in pregnant women or those likely to be pregnant. For women of childbearing age (15–40 years), Zentel should be administered within 7 days after the start of normal menstruation, or after a negative pregnancy test.

Use during lactation: It is not known whether albendazole or its metabolites are secreted in human breast milk. Zentel should not, therefore, be used during lactation unless the potential benefits are considered to outweigh the potential risks associated with treatment.

Adverse reactions: A few cases of upper gastrointestinal symptoms and diarrhoea, headache and dizziness have been reported, but no definite relationship with the drug has been shown.

FURTHER INFORMATION

In addition to its vermicial properties, albendazole has been found to have both ovicidal and larvicidal properties in man.

Pharmaceutical precautions

Suspensions should be protected from direct sunlight. They should also be shaken well before use.

Zentel is a trademark.



CNPC CPTDC

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