

Abuse of antibiotics in viral and other infections as a reason for resistance in Republic of North Macedonia

Olumchev Sashko

University of St. Cyril and Methodius, Republic of Northern Macedonia

Introduction and goal: Antibiotics are important drugs. Infections caused by bacteria (bacterial infections) can be successfully treated with antibiotics. Antibiotics can prevent the spread of the disease; also antibiotics can reduce the serious complications of the disease and prevent death as a possible course of the disease. But many antibiotics that used to be "typical" in treating bacterial infections are now ineffective or less effective. Some drugs do not work against some bacteria at all. When an antibiotic no longer works against certain types of bacteria, those bacteria are said to be resistant or "resistant" to antibiotics. Antibiotic resistance is one of the most serious health problems in the world that requires immediate solution.

Methods: We conducted a qualitative study on the social determinants of antibiotic use among community members in northern Macedonia to investigate how access to health care, health knowledge, and income influence patients' antibiotic use practices. The study included semi-structured interviews and a cross-sectional survey. The interview data and the survey of twenty participants were collected in July and August 2021. This study was embedded in a larger study with mixed methods of abusing and dispensing antibiotics among community members and health professionals.

Results: Antibiotics and the implications of their abuse were poorly understood by the participants. The low basic level of knowledge about antibiotics was consistent in a range of

educational attainment and health learning experiences at school. In the study, more than half of the participants stated that it was appropriate to discontinue antibiotics after relief of symptoms (65%). Although the populations surveyed are not comparable, it is important to note that 65% is much higher than the 37% found in a recent WHO study on antibiotic use. As in our study, low-income populations are particularly likely to support early cessation of antibiotic treatment. This may be due in part to the interaction between income and knowledge about antibiotics. If patients come from a low-income group and are unaware of the dangers of early discontinuation, it is a logical economic decision to stop taking antibiotics once the symptoms have disappeared.

Conclusion: The widespread abuse of antibiotics among these members of the community reinforces the importance of conducting research to develop effective strategies to stem the tide of antibiotic resistance in villages in the Republic of Northern Macedonia.

Biography

Olumchev Sashko was graduated in 1998 at the Faculty of Medicine in Skopje, R. Macedonia. Worked in emergency medical care until 2006. At the Center for Public Health in Gevgelija since 2006. He worked as epidemiology specialist since 2010. Work with refugees from 2016 until today. He is been working in Covid Center from 2020 and Regional Immunization Coordinator since 2006.

olumcevs@yahoo.com

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Institutional experiences of covid-19 patients with neurological manifestations

Raghavendra B S

Father Mullers Medical College, India

Coronavirus is a novel virus which involves the lungs in the majority but also involves other systems. To delineate the clinical manifestations of covid-19 virus on the central and peripheral nervous system and to assess the risk factors and the outcome of covid-19 patients with neurological manifestations, who are SARS-CoV-2 RNA PCR positive were assessed and detailed clinical history and laboratory findings were collected.

Data was analysed using percentage, mean and frequency. Out of 864 patients 17(n=17, 1.96%) had neurological manifestations. 12 out of 17 had comorbid conditions. Patients had diverse presentations ranging from acute stroke to paraplegia and encephalopathy. 10(58.8%) patients presented with stroke. In patients who developed stroke 5(50%) of the patients died. Covid-19 usually presents as a respiratory disease. The neurological manifestations of covid-19 are not uncommon, one should be aware of wide

spectrum of neurological covid-19 sign and symptoms for early diagnosis and treatment for prevention of mortality and morbidity.

Biography

Raghavendra B S has done MBBS, MD in medicine and DM in Neurology. Currently he was Professor and Head of the department Neurology Father Mullers Medical College, Mangaluru. Award winning student in his undergraduate (pathology gold) and postgraduate (cardiology and respiratory medicine gold medal). Best outgoing student in DM - Sawai Man Singh Medical college Jaipur, Rajasthan. With many publications in various national and international journals including author of rare signs - "reverse Hot Cross Bun" sign, Wrist clonus, Jaw clonus, Panda Cub sign so on. He is author of One of the large series of MOYA MOYA DISEASE in north India and one of the world's largest series of primary intraventricular haemorrhage. Was invited as a Speaker in Germany Frankfurt for his famous article "single dose does matter". Winner of Times Icon award and Iconic Healthcare Leader Award- Neurologist.

padayappa4u@gmail.com

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Group b streptococcus screening - diagnostic challenges

Abid Mahmood

Dr.Sulaiman Al Habib Hospital, Saudi Arabia

Streptococcus Group B (GBS) colonization in pregnant women is the most important risk factor for newborn disease due to vertical transmission during delivery. GBS colonization during pregnancy has been implicated as a leading cause of perinatal infections. The pregnant ladies should be screened at 36-37 weeks of gestation for detection of GBS colonization. Multiple methods are available for the purpose. Most of the laboratories use the conventional culture method. This includes direct inoculation of the vaginal/rectal swabs on appropriate media along with subculture from an enrichment broth. But despite the tedious work of 48-72 hours the sensitivity for this method is very low i.e from 60-70 percent. Alternate methods for better sensitivity are definitely required to improve the outcome. Numerous Polymerase Chain Reaction (PCR) assays have been tested. Most of these show a sensitivity of more than 90% with a specificity above 80%. But in majority of these assays the pre enrichment step is still needed. Moreover the PCR assays have the disadvantage

that the isolate is not available for antibiotic sensitivity testing which is sometimes required for penicillin allergic women. But still the PCR assays have helped a lot to prevent the neonatal sepsis caused by GBS. Despite using all the above methods and finding GBS screening negative the obstetric risk factors like labor before 37 weeks, maternal temperature of more than 38 C, early rupture of membranes and current pregnancy with GBS bacteriuria must be considered to put the pregnant lady on prophylaxis.

Biography

Abid Mahmood completed his fellowship in microbiology from Pakistan in 1995. Till 2010 he served in various hospitals of Pakistan Armed Forces as consultant microbiologist. Now since 2010 he is serving in his present institution as consultant microbiologist. He has over 50 publications to his credit as author or co-author..

abidnoor416@yahoo.com

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Neurological aspects of covid-19 infection in children

Isha Deshmukh

BJ Government Medical College, India

Coronavirus causes a wide variety of diseases in various animal species. It is known to cause innocuous respiratory infections and occasional viral diarrhea in humans. Pandemic caused by SARS-CoV-2 (a beta corona virus) is a third spill over in two decades of an animal corona virus to humans. It uses ACE2 receptors for cell entry. Active viral replication has been proved in the cells of human respiratory tract, conjunctiva and gastrointestinal tract contributing to multiple routes of transmission. Peak viral load is noted at the time of presentation which explains the transmission even in presymptomatic stage. RO is expected to be around two to three, which explains the higher pandemic potential. The virus persists on inanimate objects for a variable period of time depending on the infectious dose, temperature and humidity. The recent outbreak of corona virus infectious disease 2019 (covid-19) has gripped the world with apprehension and has evoked a scare of epic proportion regarding its potential to spread and infect humans worldwide. As we are in the midst of the on-going pandemic of covid-19, scientists are struggling to understand how it resembles and differs from the severe acute respiratory syndrome corona virus (SARSCoV) at the genomic and transcriptomic level. In a short time following

the outbreak, it has been shown that, similar to SARS-CoV, covid-19 virus exploits the angiotensin converting enzyme 2 (ACE2) receptor to gain entry inside the cells. This finding raises the curiosity of investigating the expression of ACE2 in neurological tissue and determining the possible contribution of neurological tissue damage to the morbidity and mortality caused by covid-19. Here, we investigate the density of the expression levels of ACE2 in the CNS, the host-virus interaction and relate it to the pathogenesis and complications seen in the recent cases resulting from the covid-19 outbreak. Also, we debate the need for a model for staging covid-19 based on neurological tissue involvement.

Biography

Isha Deshmukh is an academician with 6 years of experience in the field of pediatrics. She is Assistant Professor in Department of Pediatrics at BJGMC & Sassoon General Hospital, Pune in Maharashtra State of India. She has participated in various national and international conferences as speaker/ delegate. She is keen in continuing medical education as an academician. She has contributed to the welfare of the society by continuing her noble profession as a doctor in pediatrics and neonatology.

isha.deshmukh8@gmail.com

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Becoming aware of cognitive brain dynamics

Osvaldo Agamennoni

National University of the South, Argentina

Nowadays, humanity has an immeasurable amount of knowledge. This fact is not consistent with its social behavior. The human capacity to understand nature and to develop new technologies contrasts with the inability to cope with global challenges (poverty, global warming, etc.). It seems that society does not have the cognitive resources to use such knowledge. Thanks to our current communications systems, we are part of a network, that interconnects our brains with others people's brains. A higher level network. Different individual and social behavioral patterns emerge from human interaction at the speed of communication. To deeply understand these behavioral patterns a basic knowledge of dynamical tools from feedback control and self-organized system areas is required. This approach is not new. Towards the middle of the last century, a group of prestigious scientists shaped what came to be called cybernetics. It was the first rigorous interdisciplinary approach to studying the human brain functions. A tremendous amount of knowledge about brain dynamics emerged from cybernetic's scientific works. In recent decades, interdisciplinary work leading to the study of brain functions has allowed us to advance in understanding different aspects of cognition. The cognitive cycle involved in different processes like learning, memory,

problem-solving, etc., can be appreciated simply and naturally from the perspective of the feedback and self-organized systems. This systemic vision of the learning process allows people to have more tools to use his/her knowledge, and also promotes getting involved in a continuous learning process (learning to learn) and becoming aware of the effects of his/her actions in society (network propagation). The purpose of this presentation is to develop an integrated vision of the cognitive mechanisms of individual and social learning and the possible implications of promoting the social acquisition of a dynamic systemic vision of cognition.

Biography

Osvaldo Agamennoni has a Bachelor's degree in Electronics and a PhD in Control Science, both from Universidad Nacional del Sur, Argentina, and a postdoctoral experience at the University of Sydney (1992-1994), working on an AI. His research focuses on areas such as nonlinear dynamics and control, neural networks, machine learning, and neuroscience. For 15 years, he has been working on the evaluation of mild cognitive impairment through eye movements. He is a co-founder of View Mind (<https://www.viewmind.com>), a company dedicated to evaluate executive, attention and memory functions. Now is focused in the social acquisition of a systemic vision of cognition.

oagamen@gmail.com

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Rational antibiotic policy reduces mortality, duration of nicu stay in a sncu of the district hospital

Damera Yadaiah

Osmania Medical College, India

Introduction: Misuse of antibiotics is one the most common reason for drug resistant HAI and increased mortality in intensive care units, more so in the neonatal units. There is an urgent need to optimize the use of antibiotics across all neonatal settings.

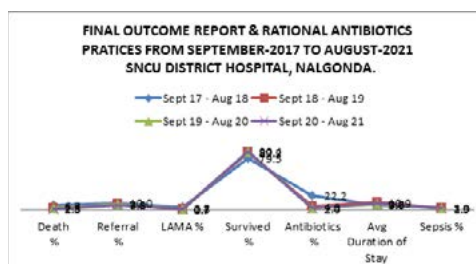
Aim: To rationalize antibiotic consumption in our unit

Methodology: In this observational study we evaluate the effects of introduction and implementations of an antibiotic prescription form in all admitted neonates in our unit from September 2017 to August 2021. MS Excel and SPSS software were used to tabulate and calculate the data.

Results: During the study a total of 5170 neonates were admitted to the SNCU. The figures show the neonatal admissions and relation of antibiotic usage to neonatal mortality. There was a significant decrease in antibiotic consumption (22.2% to 4.9% to 2.2% to 3.6%). There was significant decrease in total antibiotic days (1179 vs 196 vs 158 vs 254). A significant reduction (p-value < 0.001) in antibiotic consumption in pre and post intervention phase and also in the years post intervention phase. Also the death rate in infants with also reduced with the introduction of antibiotic policy (p<0.001). The proportion of infants staying for >24 hours reduced significantly with the introduction of antibiotic policy. There was a significant reduction in the cost to the unit and cost per patient.

Conclusion: A simple use of antibiotic prescription and strict adherence to its compliance is likely to reduce antibiotic usage and result in reduction in neonatal mortality and hospital duration.

Year	Death %	Referral %	Referral %	LAMA %	LAMA %	Survived %	Survived %	Antibiotics %	Antibiotics %	Abs Duration of Stay	Sepsis %
Sept 17 - Aug 18	6.8	6.7	192	10.0	3.8	3.7	908	79.5	22.2	7.7	3.3
Sept 18 - Aug 19	2.9	2.5	92	8.0	2.1	1.8	1014	87.7	4.9	10.0	2.5
Sept 19 - Aug 20	3.7	3.3	125	7.8	1.1	0.7	1445	89.2	3.0	8.0	1.9
Sept 20 - Aug 21	2.5	1.8	89	7.1	1.0	0.7	1256	90.4	3.3	2.4	1.9



Biography

Damera Yadaiah Working as a consultant pediatrician at District Head Quarters Hospital, Nalgonda since 25 years. Working in SNCU from 2008 as civil surgeon, hod. Instrumental in establishing 1st NICU at District Hospital, Nalgonda in 2008. He is working to strengthen the FBNC in Telangana State to reduce NMR. Discharged 10,000 babies till date, Discharged 800 babies < 1500gm, smallest baby discharged 650gm, 28wk GA, 1st of its kind in any District Hospital.

drdamerayadaiah@gmail.com

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