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Epilepsy in children

Disease Management & Barriers to Care: Part 1

Epilepsy is a common disorder that causes recurrent seizures. A seizure is a sudden alteration of behaviour due to a temporary change in the electrical functioning of the brain cells. There are many types of epilepsy.

Epilepsy is diagnosed if at least two unprovoked seizures have occurred at least 24 hours apart. Doctors will review symptoms and medical history. Several tests may be required to diagnose epilepsy and to detect the cause of seizures- including neurological examination, blood tests, genetic testing and brain imaging tests and scans such as EEG, MRI, CT scan etc.
Treatment with medicines and at times epilepsy surgery can control seizures for most people. Many require lifelong treatment, sometimes seizures eventually stop. Some children with epilepsy may outgrow the condition with age as well.

Under-recognition of seizures leads to diagnostic and treatment delays. Specifically, seizures

with outwardly subtle symptoms, such as non-motor seizures, are under-recognized. Even among the primary healthcare doctors, overutilization of EEG, improper prescription of anti-epileptic drugs, and inadequate skills in the management of drug-resistant epilepsies is a concern.

As epilepsy is a chronic and serious medical condition, long-term management by specialist doctors is required. A complete and accurate diagnosis, selection of optimal treatment, and counselling appropriate to individual needs is essential.

The patient and family have to be well informed to make decisions about choices of treatment, understand the need for long term treatment and options for dealing with drug resistant condition and its consequences.

About 70 percent of people with epilepsy are able to successfully manage epilepsy seizures with medication called anticonvulsants. Patients and families need to understand the importance of when and how to take medicine and never missing or suddenly stopping medicines.

While freedom from seizures is the ideal outcome of treatment, seizures can still occur while taking medication. Anticonvulsant drugs may cause complications or uncomfortable side effects including nausea, abdominal pain, dizziness, sleepiness, irritability, unsteadiness, poor concentration, double vision, etc- which need to be considered; however in most cases of treatment with seizure medicines, the benefits of medications clearly outweigh the risks. Learning how to reduce the risk for a seizure through lifestyle changes and understanding triggers can help better manage epilepsy. Proper adherence to prescribed treatment, appropriate follow ups with doctors, repeated regular investigations are essential. This comes at a significant cost to the patient and his family of time, money and effort.

Despite improvement in educational and social parameters over time - there is no significant change in the perception, stigma, and discrimination of epilepsy across the country. Even today it is referred to as ‘punishment for participation in a forbidden sacrifice’ and some believe that it is caused due to possession by evil spirits or sins of past life. This ongoing stigma can lead to delayed diagnosis and prevent people from seeking timely medical evaluation.

Epilepsy in early life has an adverse impact on growth and development of children. Children with epilepsy, especially in the rural settings often do not get into schools, have difficulty in coping, exhibit drowsiness, experience decreased attention, and have poor academic performance. Consequently, they experience discrimination in school environments, and some discontinue education.

The disability and psychosocial impact caused by epilepsy imposes huge burden on the individual, family and the community- especially in a traditional socio-culturally determined country like India.

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The knowledge, attitudes, beliefs, and practices of individuals with epilepsy, their family, and society influence recovery and quality of life. A lack of illness specific knowledge causes people to follow different practices to manage the condition on their own understanding; and many patients discontinue treatment within 1 year because of poor knowledge regarding the outcomes after discontinuation.

Medication non-adherence is a major barrier to illness control- there exists poor understanding of the need for strict adherence to treatment routines, a lack of belief in medication efficacy, unavailability of medication in rural areas, and high costs of anti-epileptic medication are some key factors for discontinuation of medication.

The large treatment gap and poor quality of life is further worsened by the associated comorbidities and conditions. Research has highlighted the association of epilepsy in children with behavioural and psychiatric problems. Some comorbidities identified were: migraine, anxiety, depression, sleep disturbances, neurocysticercosis, pulmonary tuberculosis, and extra pulmonary tuberculosis. Behavioural problems in children with epilepsy, and the association of epilepsy with cognitive impairment have also been reported.

Epilepsy imposes a substantial economic burden as well. People from lower socioeconomic status are more vulnerable due to their limited capacity to access good quality healthcare. They tend to live at long distances from healthcare facilities and have to travel far to reach quality hospitals. Their direct costs includes medical costs related to: prevention, diagnosis, treatment and rehabilitation, outpatient treatment, investigation charges, radiological investigations, cost of medicines etc. The indirect costs include loss of time, productivity, and wages incurred by the families.

Even though epilepsy is an eminently treatable condition, it still remains a public health problem due to high stigma, wide socioeconomic inequity, large treatment gap, and the poor healthcare delivery system in India. Thus, the psychosocial and economic impact of epilepsy becomes crucial to understand. Epilepsy remains a complex public health problem that requires an integrated multidisciplinary approach to manage.

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Conditions or disorders commonly associated with Down Syndrome?

In addition to intellectual and developmental disabilities, children with Down syndrome are at an increased risk for certain health problems. However, each individual with Down syndrome is different, and not every person will have serious health problems. Many of these associated conditions can be treated with medication, surgery, or other interventions.

HEART DEFECTS.

Almost one-half of babies with Down syndrome have congenital heart disease (CHD), the most common type of birth defect. The incidence of CHD in babies born with Down syndrome is up to 50%. The most common cardiac defect associated with Down syndrome is an atrioventricular septal defect (AVSD), and this defect makes up to 40% of the congenital cardiac defects in Down syndrome. The other cardiac defects associated with trisomy 21 are secundum atrial defect (10%), tetralogy of Fallot (6%), and isolated PDA (4%), while about 30% of the patients have more than one cardiac defect.

Congenital cardiac defects are by far the most common cause associated with morbidity and mortality in patients with Down syndrome especially in the first 2 years of life. Because of such a high prevalence of CHD in patients with Down syndrome, it has been recommended that all patients get an echocardiogram within the first few weeks of life.

GASTROINTESTINAL (GI) TRACT ABNORMALITIES

Patients with trisomy 21 have many structural and functional disorders related to the GI

tract. Structural defects can occur anywhere from the mouth to anus, and it has been found that certain defects like duodenal and small bowel atresia or stenosis, annular pancreas, imperforate anus, and Hirschsprung disease occur more commonly in these patients as compared to the general population.

About 2% of patients with Down syndrome have Hirschsprung disease while 12% of patients with Hirschsprung disease have Down syndrome. Hirschsprung disease is a form of functional lower intestinal obstruction in which the neural cells fail to migrate to the distal segment of the rectum resulting in an a ganglionic segment which does not have normal peristalsis resulting in failure of normal defecation reflex causing a functional obstruction. The infant usually presents with signs and symptoms related to intestinal obstruction. Duodenal atresia and imperforate anus usually present in the neonatal period.

Apart from the structural defects, patients with Down syndrome, patients are also prone to many other GI disorders like gastroesophageal reflux (GERD), chronic constipation, intermittent diarrhoea, and celiac disease. Since there is a strong association of celiac disease with Down syndrome being present in about 5% of these patients, it is recommended to do yearly screening of celiac disease. Once diagnosed, these patients will have to remain on a gluten-free diet for the rest of life.

HEMATOLOGIC DISORDERS

There are several haematological disorders associated with Down syndrome. The haematological abnormalities in a newborn with Down syndrome (HANDS) constitute neutrophilia, thrombocytopenia, and polycythaemia. Patients with Down syndrome are 10-times more at risk of developing leukaemia's, which constitute about 2% of all paediatric acute lymphoblastic leukaemia and 10% of all paediatric acute myeloid leukaemia.

NEUROLOGIC DISORDERS

Trisomy 21 has associated with reduced brain volume especially hippocampus and cerebellum. Hypotonia is the hallmark of babies with Down syndrome and is present in almost all of them. It is defined as decreased resistance to passive muscle stretch and is responsible for delayed motor development in these patients. Because of hypotonia Down syndrome patients have joint laxity that causes decreased gait stability and increased energy requirement for physical exertion. These patients are prone to decreased bone mass and increased risk of fractures due to the low level of physical activity, while the ligamentous laxity predisposes these patients to atlantoaxial subluxation.

Five percent to 13% of children with Down syndrome have seizures, out of that, 40% will have seizures before their first birthday, and in these cases, the seizures are usually infantile spasms. Down syndrome children with infantile spasm do respond better to antiepileptics as compared to other kids with the same, and therefore, early intervention and treatment improve the developmental outcome.

Lennox-Gestaut syndrome is also seen to be more prevalent in children with Down syndrome when it does occur, has a late onset, and is associated with reflex seizures along with an increased rate of EEG abnormalities.

Forty percent of patients with Down syndrome develop tonic-clonic or myoclonic seizures in their first 3 decades.

Dementia occurs more commonly in patients older than 45 years of age with Down syndrome and about 84% are more prone to develop seizures. The seizures in these patients are related to the rapid decline in their cognitive functions.

The risk of developing early-onset Alzheimer disease is significantly high in patients with Down syndrome with 50% to 70% of patients developing dementia by the age of 60 years. Nearly all the patients with Down syndrome have mild to moderate learning disability.

ENDOCRINOLOGICAL DISORDERS

Thyroid gland dysfunction is most commonly associated with Down syndrome. Hypothyroidism can be congenital or acquired at any time during life. Hyperthyroidism is much less frequent in patients with Down syndrome as compared to hypothyroidism.

Abnormalities in sexual development are also noted to be significant with delayed puberty in both genders. In girls, primary hypogonadism presents as delay in menarche or adrenarche, while in boys it can manifest as cryptorchidism, ambiguous genitalia, micropenis, small testes, low sperm count, and scanty growth of axillary and pubic hair.

The insulin-like growth factor is also said to be responsible for the and short stature in patients with Down syndrome.

MUSCULOSKELETAL DISORDERS

Children with Down syndrome are at an increased risk of reduced muscle mass because of hypotonia increased ligamentous laxity which causes retardation of gross motor skills and can result in joint dislocation. These patients also have vitamin D deficiency due to several factors like inadequate exposure to sunlight, inadequate intake of vitamin D, malabsorption secondary to celiac disease, increased breakdown because of anticonvulsant therapy, among other factors. These factors increase the risk of decreased bone mass in children with Down syndrome and predispose them to recurrent fractures.

REFRACTIVE ERRORS AND VISUAL ABNORMALITIES

Ocular and orbital anomalies are common in children with Down syndrome. These include blepharitis (2-7%), keratoconus (5-8%), cataract (25% to 85%), retinal anomalies (0% to 38%), strabismus (23% to 44%), amblyopia (10% to 26%), nystagmus (5% to 30%), refractive errors (18% to 58%), glaucoma (less than 1%), iris anomalies (38% to 90%) and optic nerve anomalies (very few cases).

The ocular anomalies, if left untreated, can significantly affect the lives of these patients. Therefore, all the patients with Down syndrome should have an eye exam is done during the first 6 months of life and then annually.

OTORHINOLARYNGOLOGICAL (ENT) DISORDERS

Ear, nose, and throat problems are also quite common in patients with Down syndrome. The anatomical structure of the ear in Down syndrome patients predisposes them to hearing deficits. Hearing loss is usually conductive because of impaction of cerumen and middle ear pathologies that include chronic middle ear effusion due to the small eustachian tube, acute otitis media, and eardrum perforation. These patients usually require pressure equalization tubes for the treatment.

The sensorineural hearing loss has also been associated with Down syndrome because of the structural abnormalities in the inner ears such as narrow internal auditory canals.

Early Intervention in Down's syndrome can achieve a productive life at par with others.

When to evaluate and how frequently

WHAT TO CHECK?	HOW TO CHECK?	WHEN TO BE DONE?
Growth	Weight, height and head Circumference	Every 3 months during first year and then every year
Ear evaluation	BERA/OAE for hearing assessment / tympanometry	At least twice in first year, then every year
Eye evaluation	Cataract/refractory error	Every 6 months in first year Every year till the age of 5 year Every 2 years till the age of 12 years Every 3 years>12 years
Thyroid profile	T4 and T5H (thyroid hormones)	At initial contact at least at 6 month and at 12 months in first year and thereafter every year
Heart	EEG and ECHO	At initial contact. Then as per need
Sleep	Polysomnography (sleep studies)	Sleep studies for all by 4 years
Blood	Complete blood count	After 6 months in first year and then Annually till 12 years of age

**Source: Nelson textbook of paediatrics*

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KEM HOSPITAL & RESEARCH CENTRE, PUNE'S COLLABORATIVE RESEARCH WITH SWEDISH UNIVERSITY PUBLISHED IN LANCET - REGIONAL HEALTH SOUTHEAST ASIA

Study on genetic similarities and differences between subgroups of type 2 diabetes in India and Europe

A collaborative research between KEM Hospital Research Centre, Pune and Lund University in Sweden on genetic similarities and differences between subgroups of type 2 diabetes in India and Europe has been published in The Lancet Regional Health - Southeast Asia in May 2023. This is the second publication under this collaboration. The knowledge will help improve treatment of the disease in India, where type 2 diabetes represents a growing disease burden. The research exchange was supported by the Department of Science and Technology (DST) in India and the Swedish Research Council in Sweden. The collaborative research was led by Dr Rashmi Prasad, Associate Professor in Genomics, Diabetes, and Endocrinology at Lund University Diabetes Centre (LUDC) together with Prof. Dr. Chittaranjan S Yajnik, Director & Consultant – Diabetes Unit at King Edward Memorial (KEM) Hospital and Research Centre in Pune, India. The new study confirms that the genetic scores developed in European patients are applicable on patients in western India, though there are differences in the associations between the two populations. The results are based on clinical data from 2217 patients with type 2 diabetes from the WellGen study in western India, genetic data was available in 821 people of this group.

Researchers at Lund University, Malmo, Sweden have shown that diabetes can be divided into five subgroups, including SAID (severe auto-immune diabetes), SIDD (severe insulin-deficient diabetes), SIRD (severe insulin-resistant diabetes), MOD (mild obesity-related diabetes) and MARD (mild age-related diabetes). SAID is also known as type 1 diabetes, the remaining four subgroups belong to type 2 diabetes. This paper was published in the Lancet Diabetes & Endocrinology in 2018. Dr Rashmi Prasad is one of the authors of this acclaimed study. The paper generated a lot of interest and was replicated in many other populations which confirmed that diabetes can be divided into the above subgroups based on clinical and biochemical characteristics and that this classification is useful to guide treatment and may help predict complications. In 2021, the Swedish group at LUDC published a new study in the Nature Genetics that demonstrated genetic differences between the four subgroups of type 2 diabetes in Sweden.

Dr Yajnik said that our first study under this collaboration was published in Diabetologia in 2021 and was on people who were diagnosed with type 2 diabetes below 45 years of age. We confirmed the 4 subgroups in the Indian type 2 diabetes patients but the proportion

India-Sweden diabetes collaborative group. L to R:
Dr Pranay Goel, Pooja Kunte, Rucha Wagh, Dr Chittaranjan Yajnik, Dr Sharvari Shukla,
Dr Rashmi Prasad, Dr Leif Groop.

of subgroups was different in Indian and Swedish cohorts. We found that the commonest subgroup of diabetes in Indian cohort was severely insulin deficient (SIDD), while in Sweden it was mild obesity-related (MOD) and associated with insulin resistance. This difference could be due to genetic or environmental factors. There are a number of differences in the environment and lifestyle of these two populations which reflect in body size and metabolism. These differences start from before conception and persist through lifecourse.

The collaboration therefore decided to study genetics of type 2 diabetes subgroups in a larger cohort of Indian and Swedish patients, not restricting to those diagnosed below the age of 45 years. The largest subgroup was still the SIDD. We used genetic markers of type 2 diabetes and a number of associated characteristics (obesity, insulin secretion, insulin resistance, lipid abnormalities, etc.). We found that the genetic scores developed in Europeans are usable in Indians and there are broad similarities in associations when type 2 diabetes is considered as a single group. However, there are subtle differences in genetic associations of the subgroups between Indian and Swedish patients with type 2 diabetes. This paints a complex picture of type 2 diabetes and a need for further studies of genetic and environmental factors which contribute to the metabolic disorder and its different mechanisms and manifestations in different populations. For example, when we looked at

the genetic score for the commonly used obesity parameter BMI (body mass index, weight / height2) Indian and Swedish patients had similar scores but for each score Indians have a much lower BMI, suggesting that a number of environmental factors might prevent Indians from expressing their genetic potential into a physical characteristic. Undernutrition in Indians for many generations may be responsible.

Two such interesting differences between Indian and Swedish cohorts refer to deposition of fat in the liver and association with vitamin B12 status. A number of studies in India and abroad have shown that increased liver fat is a characteristic feature of Indian type 2 diabetes patients. In our study we found associations of genetic risk score for liver fat with 3 out of 4 subgroups in Indian cohort but with none in Swedish. Vitamin B12 deficiency is common in India, related to vegetarian food habits but is uncommon in Sweden where people are traditionally meat eaters. Our previous studies had found a strong association of FUT genes with vitamin B12 status. Interestingly, FUT genes was associated with type 2 diabetes and with MOD subgroup only in Indians but not in the Swedish cohort. Further studies are clearly needed to understand the mechanisms of such associations and their implications for prevention and treatment of type 2 diabetes. One such study has already started in Pune. In the PRIYA (Pune Rural Intervention in Young Adolescents) trial, we supplemented young rural adolescents with vitamin B12 and other micronutrients to reduce risk of diabetes in their children. Initial reports showed a beneficial effect on their brain development, future studies will investigate the effects on risk of diabetes.

Dr Rashmi Prasad, who is originally from India, said that we found interesting examples of genetic differences between the Indian and Swedish groups in our study. This suggests that the causes of type 2 diabetes differ between the two populations. Vitamin B12 deficiency may be one of the factors that drives the pathogenesis of the MOD subgroup in Indians.

Type 2 diabetes is a rapidly growing disease burden in India. Ancient Indian physicians had observed heterogeneity of diabetes. Research like ours will help better understand the causes of diabetes and is a step towards prevention and effective treatment, says Chittaranjan S Yajnik, who is a medical doctor and director of the Diabetes Unit at KEM Hospital and Research Centre, Pune.

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Insulin deficiency key trigger for type 2 diabetes in Indians

ANURADHA MASCARENHAS
PUNE, MAY 4

THE PANCREAS' failure to secrete adequate insulin appears to have been the trigger for type 2 diabetes in over half of the Indian patients (especially those diagnosed before the age of 45) in an Indo-Swedish study. This is in contrast to Western countries, where type 2 diabetes is mostly caused by insulin resistance, said the study, which was published in *The Lancet Regional Health Southeast Asia*.

worsens, the capacity of the pancreas to produce insulin keeps dropping, resulting in deficiency.

"In Indians, we have to use drugs which will help the pancreas create more insulin," said lead author Dr C S Yajnik, who is also the Diabetes Unit Director and Consultant at Pune's King Edward Memorial Hospital and Research Centre.

Explaining this, Dr Yajnik said: "A normal person secretes enough insulin to achieve the desired effect on the

EXPLAINED

E. Tailoring treatment to each patient

According to Dr Piyush Lodha, Diabetologist and General Physician at Pune's Ruby Hall Clinic, every patient with type 2 diabetes can behave differently. "This genetic classification is a new step in identifying the underlying pathophysiology in a particular patient. Classifying every patient and starting appropriate treatment will help decrease diabetes-

cations in the Indian population," he said.

creas is not either because its poor neighbour factor which the pancreas primarily

According to Dr Yajnik, these findings will help improve the treatment of type 2 diabetes in India, where it is estimated that 74.2 million people had the disease in 2021.

The study highlights the predominance of insulin deficiency in Indian type 2 diabetes patients, while in the Swedish cohort it was associated with obesity and insulin resistance.

There were two other key differences between Indian and Swedish cohorts. "In our study, we found associations of a genetic risk score for liver fat in 3 out of 4 subgroups in the Indian cohort but none in Swedish. In addition, vitamin B12 deficiency-related genes were associated with the MOD subgroup only in Indians, not in the Swedish," Dr Yajnik said, adding that this suggests that the causes of type 2 diabetes differ between the two populations.

"We found that genetic scores developed in Europeans for type 2 diabetes and its traits are usable in Indians. However, there are differences in the associations of these scores with some of these traits in the two populations. For example, for a given level of genetic score for body mass index (used to define obesity) Indians have a much lower BMI compared to the Swedish. It suggests that for a given genetic potential, Indians reach a lower BMI, probably because of undernutrition, which has existed for several generations" Dr Yajnik said.

The study was also led by Dr Rashmi Prasad, Associate Professor in Genomics, Diabetes and Endocrinology at Lund University Diabetes Centre. The results are based on clinical data from 2,217 patients from Pune with type 2 diabetes.

FULL REPORT ON www.indianexpress.com

PUNE

केईएम व लुंड यूनिवर्सिटी का शोध लैंसेट के जर्नल में प्रकाशित

रास्ता पेठ, 6 मई (आ.प्र.)

केईएम हॉस्पिटल एंड रिसर्च सेंटर और स्वीडन के लुंड यूनिवर्सिटी ने संयुक्त रूप से बनाया हुआ टाइप 2 डायबिटीज संबंधी शोध, द लैंसेट – रीजनल हेल्थ – साउथ ईस्ट एशिया जर्नल में प्रकाशित किया गया है. भारत और यूरोप में टाइप 2 डायबिटीज के विभिन्न प्रकारों के बीच अनुवांशिक समानताओं संबंधी यह शोध है. एक ओर जहां भारत में डायबिटीज तेजी से फैल रहा है, वहां इस अध्ययन का उपयोग उपचार में सुधार लाने के लिए किया जा सकता है. स्वीडिश रिसर्च कौन्सिल और भारत के विज्ञान और तंत्रज्ञान विभाग (डीएसटी – डिपार्टमेंट ऑफ साइंस एंड टेक्नोलॉजी) ने इस सहयोगात्मक संशोधन को समर्थन दिया है. भारतीय वंश के और लुंड यूनिवर्सिटी डायबिटीज सेंटर (एलयूडीसी) के जेनेटिक डायबिटीज और एंडोक्रिनोलॉजी इस विषय के सहयोगी प्राध्यापक रश्मी प्रसाद और केईएम हॉस्पिटल एंड रिसर्च सेंटर पुणे के डायबिटीज विभाग प्रमुख डॉ. चित्तरंजन एस. याज्ञिक इन्होंने इस संशोधन का नेतृत्व किया है. इस नए अध्ययन का परिणाम वेलकम स्टडी के पश्चिम भारत के 2,217 डायबिटीज से पीड़ित मरीजों की वैयक्तिय जानकारी और इस ग्रुप के 821 मरीजों के जेनेटिक डाटा पर आधारित है.

डॉ. चित्तरंजन एस. याज्ञिक

गर्भाशयातच योग्य पोषण गरजेचे

'टाइप-२' मधुमेहला रोखण्यासाठी अभ्यासपूर्ण निष्कर्ष

'टाइप-२ मधुमेह म्हणजे काय?

'व्हिटॅमिन बी १२'ची कमतरता

केईएम हॉस्पिटल अॅन्ड रिसर्च सेंटर पुणे और स्वीडन के लुंड युनिवर्सिटी का सहयोग

संशोधन लैन्सेट - रिजनल हेल्थ - साऊथ ईस्ट एशिया जर्नल में प्रकाशित

पुणे : केईएम हॉस्पिटल अॅन्ड रिसर्च सेंटर पुणे और स्वीडन के लुंड युनिवर्सिटी इन्होंने भारत और यूरोप में टाईप२ मधुमेह के विविध प्रकारों में अनुवंशिक समानता और फरक इनपर किया सहयोगी संशोधन द लैन्सेट – रिजनल हेल्थ – साऊथ ईस्ट एशिया इस जर्नल में प्रकाशित किया है. एक ओर जहां भारत में मधुमेह का प्रसार तेजी से बढ रहा है, वहीं इस अध्ययन का उपयोग मधुमेह के उपचार में सुधार लाने के लिए किया जा सकता है.स्वीडिश रिसर्च कौन्सिल और भारत के विज्ञान और तंत्रज्ञान विभाग (डीएसटी – डिपार्टमेंट ऑफ साय्न्स अॅन्ड टेक्नोलॉजी) इन्होंने इस सहयोगात्मक संशोधन को समर्थन दिया है. भारतीय वंश के और लुंड युनिवर्सिटी डायबेटिस सेंटर (एलयुडीसी) के जेनेमिक्स,डायबेटिस और एंडोक्रिनोलॉजी इस विषय के सहयोगी प्राध्यापक रश्मी प्रसाद और केईएम हॉस्पिटल अॅन्ड रिसर्च सेंटर पुणे के डायबेटिस विभाग प्रमुख डॉ.चित्तरंजन एस.याज्ञिक इन्होंने इस संशोधन का नेतृत्व किया है. इस नए अध्ययन का परिणाम वेलजेन स्टडी के पश्चिम भारत के २२१७ मधुमेही मरीजों की वैयक्तिय जानकारी और इस समूह के ८२१ मरीजों के जेनेटिक डाटापर आधारित है.

भारत आणि युरोपमधील टाईप २ मधुमेहाच्या विविध प्रकारांमधील अनुवंशिक समानता आणि फरक यावर अभ्यास

पुणे : केईएम हॉस्पिटल अॅन्ड रिसर्च सेंटर पुणे आणि स्वीडनमधील लुंड विद्यापीठ यांनी भारत आणि युरोपमधील टाईप२ मधुमेहाच्या विविध प्रकारांमधील अनुवंशिक समानता आणि फरक याबाबत केलेले सहयोगी संशोधन द लॅन्सेट – रिजनल हेल्थ – साऊथ ईस्ट एशिया या नियतकालिकेत प्रकाशित झाले आहे. एकीकडे भारतात मधुमेहाचे प्रमाण झपाट्याने वाढत असताना या अभ्यासाचा उपयोग मधुमेहाशीलित उपचार सुधारण्याकरिता चालना देण्यासाठी मदत होऊ शकेल. स्वीडिश रिसर्च कौन्सिल आणि भारताचे विज्ञान आणि तंत्रज्ञान विभाग (डीएसटी – डिपार्टमेंट ऑफ सायन्स अॅन्ड टेक्नोलॉजी) यांनी या सहयोगात्मक संशोधनास पाठिंबा दिला आहे. भारतीय वंशाचे व लुंड विद्यापीठ डायबेटिस सेंटर (एलयुडीसी) येथील जेनेटिक्स,डायबेटिस आणि एंडोक्रिनोलॉजी या विषयातील सहयोगी प्राध्यापक रश्मी प्रसाद आणि केईएम हॉस्पिटल अॅन्ड रिसर्च सेंटर पुणेच्या डायबेटिस विभागाचे प्रमुख डॉ.चित्तरंजन एस.याज्ञिक यांनी या संशोधनाचे नेतृत्व केले आहे. या नवीन अभ्यासाची पार्श्वभूमी चॅलेंजेस स्टडीमधील पश्चिम भारतातील २२१७ मधुमेही रुग्णांच्या वैद्यकीय माहितीवर व या गटातील ८२१ रुग्णांच्या जेनेटिक डाटावर आधारित आहे.

लुंड विद्यापीठातील संशोधकांनी याआधी मधुमेहात फरक उपप्रकारांमध्ये विभागले होते. २०१८ मध्ये लॅन्सेटमध्ये प्रकाशित झालेला हा अभ्यास वैद्यकीय क्षेत्रात लोकप्रिय झाला आणि अनेक ठिकाणी याचा वापर करण्यात आला. या उपप्रकारात एसएआरडी (सिव्हिअर ऑटोइम्यून डायबेटिस,एसआयडीडी (सिव्हिअर इन्सुलिन – डेफिशिएंट डायबेटिस),एसआयआरडी (सिव्हिअर इन्सुलिन – रेझिस्टंट डायबेटिस), एमओडी (मॉडरेट ओबेसिटी रिलेटेड डायबेटिस) आणि एमआरडी (मॉडरेट एज रिलेटेड डायबेटिस) यांचा समावेश आहे. त्यानंतर एसी प्रसाद आणि एलयुडीसीमधील त्यांच्या सहकाऱ्यांनी स्वीडनमधले टाईप२ मधुमेहाच्या चार प्रकारांमध्ये अनुवंशिक फरक दर्शविणारा तेच डेटासेट हा नवीन अभ्यास प्रकाशित केला.

केईएम हॉस्पिटल अॅन्ड रिसर्च सेंटर पुणे च्या डायबेटिस विभागाचे प्रमुख डॉ.चित्तरंजन एस.याज्ञिक म्हणाले की, या सहयोगात्मक केलेले पहिले संशोधन २०२१ मध्ये डायबेटोलॉजिया नियतकालिकेत प्रकाशित झाले व ४५ वर्षांखाली कमी वयोगटातील मधुमेहीवर हा आधारित होता. या अभ्यासानुसार लक्षण क्षमता विदान झालेल्या मधुमेहाचा सर्वात सामान्य प्रकार हा इन्सुलिन प्रतिरोधक (एसआयआरडी) असून इन्सुलिनची कमतरता हा आहे. या अभ्यासामध्ये सहभागी झालेल्या बहुसंख्य मधुमेहींमध्ये इन्सुलिनची कमतरता हीच समस्या होती. एकीकडे भारतीयांमध्ये इन्सुलिनची कमतरता हा प्रमुख उपप्रकार होता,तर स्वीडनमध्ये लठ्ठपणा (एमओडी)

अणि इन्सुलिन रेझिस्टंस हा होता. हा फरक अनुवंशिक व पर्यावरणीय घटकांमुळे होता का याबद्दल अभ्यास करणे महत्वाचे होते. दोन्ही लोकसंख्यांमध्ये पर्यावरण अणि जीवनशैली याबाबी फरक असून शरीराचा आकार अणि कार्यसंबंधकारक बाबींमध्ये हे प्रतिबिंबित होते. हे फरक गर्भधारणेपूर्वीपासून सुरू होतात अणि आयुष्यभर राहतात.

महत्वपूर्ण अनुवंशिकतेतील हे दुवे संशोधन या उपगटांवर आधारित आहे,असे डॉ.याज्ञिक यांनी सांगितले. या संशोधनामध्ये फक्त ४% जणांच्या कमी वयोगटामध्ये आजची सर्वाधिक रुग्णांची नोंदी या संशोधनासुद्धा इन्सुलिनची कमतरता हाच उपगट प्रकर्षाने दिसून आला. या संशोधनामध्ये लठ्ठपणा,इन्सुलिनची रिझिस्टंसी,इन्सुलिनचा प्रतिरोध,लिपिडमध्ये असामान्यता इत्यादीमाणसे टाईप२ मधुमेहाशी निगडीत अनुवंशिक घटकांचा (जेनेटिक मार्कर्स) वापर केला गेला. अनुवंशिकतेवर आधारित अभ्यासाच्या निष्कर्षांमध्ये असे आढळून आले की,अनुवंशिकतेचा मधुमेहाशी संबंध वर्षांच प्रभावाच समान आहे,मात्र जेव्हा आपण मधुमेहाला उपगटांमध्ये विभाजित करतो,तेव्हा भारतातील उपप्रकारांमध्ये गतीत भारत आणि स्वीडनमधील उपगटात देखील फरक दिसून आला. त्यामुळे दोन वेगवेगळ्या देशांमधील मधुमेह आणि आनुवांशिक देशांमधील मधुमेहामध्ये देखील फरक आहे. हे गुंतागुंतीचे बाबतच आहे हे यामुळे स्पष्ट होते,असे डॉ.याज्ञिक म्हणाले. त्यामुळे यशस्वीपणे विकार आणि त्यामध्ये विविध लोकसमूहांमध्ये होणारा परिणाम आणि यामध्ये अनुवंशिक व पर्यावरणीय घटकांचा संबंध यावर अधिक अभ्यास करणे गरजेचे आहे.

भारत आणि स्वीडिश रुग्ण गटातील तसा योगायोगाचाच फरक म्हणजे यकृतामध्ये जमा होणारी चरबी आणि विटामिन बी१२ संबंधित अनुवंशिकता भारत आणि परदेशातील अनेक अभ्यासांमधून असे दिसून आले आहे की,यकृतातील चरबी जास्तीने हे विशेष करून भारतातील टाईप२ मधुमेहींमध्ये दिसून येते. विटामिन बी१२ ची कमतरता ही देखील भारतीयांमध्ये जास्त दिसून येते,तर स्वीडनमध्ये यांसारखा खात्रीशी संबंध असल्याचे विटामिन बी१२ ची कमतरता कमी आहे. आमच्या आधीच्या अभ्यासांमध्ये एमयुटी जीन्स आणि विटामिन बी१२ चा संबंध असल्याचे दिसून आले होते.

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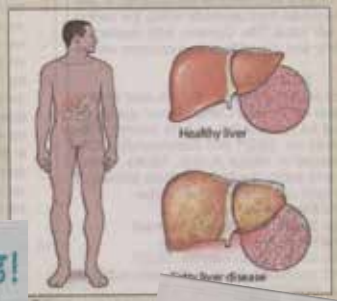
यकृतातील चरबी ठरतेय टाइप-२ मधुमेहाचे कारण

केईएम हॉस्पिटल आणि स्वीडनमधील विद्यापीठाचे संशोधन

प्रभात वृत्तसेवा

पुणे, दि. ८ - अनुवंशिकता आणि बदललेली जीवनशैली यामुळे टाइप-२ मधुमेहाचे प्रमाण अधिक वाढत आहे, असे केईएम हॉस्पिटल अँन्ड रिसर्च सेंटर पुणे आणि स्वीडनमधील विद्यापीठाने केलेले संशोधनातून समोर आले. हा वेदनादायक असा फरक म्हणजे यकृतामध्ये जमा होणारी चरबी आणि विटामिन बी-१२ मुळेही टाइप-२ मधुमेही संख्या वाढत असल्याचे दिसून आले. अशी माहिती डायबेटिस



व्हिटॅमिन बी १२ मुळेही टाईप २ मधुमेहींमध्ये वाढ!

पुढारी ANCHOR

पुरोपमध्ये आढळले प्रमाण कमी

टाईप-२ मधुमेह म्हणजे काय?

संशोधनातून माहिती समोर

मधुमेहाचे कारण शोधण्यासाठी संशोधन

पुणे, ता. ५ : केईएम हॉस्पिटल

केईएम हॉस्पिटल अॅन्ड रिसर्च सेंटर पुणे और स्वीडन के युनिव्हर्सिटी का सहयोगी संशोधन लॅन्सेट - रिजनल हेल्थ - साऊथ ईस्ट एशिया जर्नल में प्रकाशित

पुणे । हमनवा प्रतिनिधी

केईएम हॉस्पिटल अॅन्ड रिसर्च सेंटर पुणे और स्वीडन के लुंड युनिव्हर्सिटी इन्होंने भारत और युरोप में टाईप२ मधुमेह के विविध प्रकारों में अनुवंशिक रुग्नानता और फरक इनपर किया सहयोगी संशोधन द लॅन्सेट - रिजनल हेल्थ - साऊथ ईस्ट एशिया इस जर्नल में प्रकाशित किया है. एक ओर जहां भारत में मधुमेह का प्रसार तेजी से बढ रहा है, वहीं इस अध्ययन का उपयोग मधुमेह के उपचार में सुधार लाने के लिए किया जा सकता है.स्वीडिश रिसर्च कौन्सिल और भारत के विज्ञान और तंत्रज्ञान विभाग (डीएसटी - डिपार्टमेंट ऑफ साएन्स अॅन्ड टेक्नोलॉजी) इन्होंने इस सहयोगात्मक संशोधन को समर्थन दिया है. भारतीय वंश के और लुंड युनिव्हर्सिटी डायबेटिस सेंटर (एलएमडीसी) के जेनॉमिक्स,डायबेटिस और एंडोक्रिनोलॉजी इस विषय के सहयोगी प्राध्यापक रश्मी प्रसाद और केईएम हॉस्पिटल अॅन्ड रिसर्च सेंटर पुणे के डायबेटिस विभाग प्रमुख डॉ. चित्तरंजन एस.याज्ञिक इन्होंने इस संशोधन का नेतृत्व किया है. इस नए अध्ययन का परिणाम वेलजेन स्टडी के पश्चिम भारत के २२७७ मधुमेही मरीजों की वैद्यकीय जानकारी और इस समूह के ८२१ मरीजों के जेनोटिक डाटापर आधारित है.

'Insulin deficiency key factor for type II diabetes in India'

Steffy.Thever@timesgroup.com

Pune: Insulin deficiency and not resistance, was a major contributor in type II diabetes cases in India, a study by the city-based KEM Hospital's Research Centre and Sweden's Lund University has found. Researchers said the findings can be used to improve the disease treatment in the country.

The study indicated that in this genetic environment was a key factor driving the type II diabetes cases in the country more than the hereditary and lifestyle aspects. "Not to ideficiency in pregnant women can affect the child's muscle build up, eventually leading to diabetes," Dr Chittaranjan Yajnik, chief of diabetes unit at KEM Hospital, Pune, said.

The collaborative research was led by Dr Yajnik and Dr Rashmi Prasad, associate professor in genomics, diabetes, and endocrinology at Lund University Diabetes Centre.

It was published in the 'Lancet Regional Health South-East Asia' journal on May 1. The research exchange was supported by the Department of Science and Technology in India and the Swedish Research Council in Sweden.

The study confirmed that the genetic scores developed among European patients were applicable to their counterparts in western India. The results are based on clinical data from 2,217 patients with type II diabetes from western India. The genetic data was available of 821 people of the group.

"The study found that the commonest subgroup of diabetes in Indian cohort was severely insulin deficient. In Sweden, it was mild obesity-related diabetes associated with insulin-resistance. This difference could be due to genetic or environmental factors," he said.

He said there were broad similarities and subtle differences in associations of the patients between Indian and Swedish. "When looking at the genetic score for the commonly used obesity parameter, body

THE PREVALENCE

- After China, India had the largest numbers of diabetics (aged 20-79) in 2021, at 74.2 million
- The number is estimated to increase to 124.9 million by 2045

25 million Indians are at a higher risk of developing diabetes in the future

THE SUBGROUPS

- Severe autoimmune diabetes
- Severe insulin-deficient diabetes
- Severe insulin-resistant diabetes
- Mild obesity-related diabetes

केईएम हॉस्पिटल आणि स्वीडन विद्यापीठाच्या रिसर्चचा उपयोग होणार मधुमेहावरील उपचारासाठी

स्वीडिश रिसर्च कौन्सिल आणि भारतातील विज्ञान विभागाचा सहयोगात्मक संशोधनाला पाठिंबा

पुणे । प्रतिनिधी

केईएम हॉस्पिटल अॅन्ड रिसर्च सेंटर, पुणे आणि स्वीडनमधील विद्यापीठाने केलेले संशोधन लॅन्सेट-रिजनल हेल्थ-साऊथ ईस्ट एशिया या नियतकालिकात प्रकाशित

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ANNUAL MEETING OF WILSON DISEASE PATIENTS HELD AT KEM HOSPITAL, PUNE

Regular monitoring and consistency in treatment for patients with Wilson Disease key to their normal quality of life

Regular monitoring of patients with Wilson Disease (WD) along with early diagnosis and consistency in treatment and medication is a key to normal future of these children opined various experts .

KEM Hospital, Pune on Wednesday organised an annual meeting of Wilson Disease patients and their parents on Wednesday. The main aim was to create awareness about the management of this rare genetic disease and imbibe the importance of regular monitoring. Around 100 patients and their parents participated in the initiative.

Dr. Ashish Bavdekar, Consultant Gastroenterologist KEM Hospital Pune , Dr Snehawardhan Pandey, Transplant Surgeon , Dr.Jyoti Singhal, Paediatric Nephrologist, Dr.Abhijit Botre, Paediatric Neurologist and Smita Kokitkar, Clinical nutritionist at KEM Hospital Pune interacted with the patients and their parents .

Dr.Ashish Bavdekar said that the rare genetic disease is a condition where there is excess accumulation of copper in the body especially in the liver, brain, kidneys, and cornea . If not diagnosed early, in due course it may progress to neurological dysfunction, liver cirrhosis and abnormalities in the cornea of the eyes. Normally our body can get rid of excess copper through urine. Wilson's disease is caused by mutations in the ATP7B gene, which

is responsible for transporting copper out of the liver and into the bile ducts for excretion. In patients with Wilson Disease, due to their genetic defect, the body is not able to get rid of this excess copper and so it builds up in the body

Initially parents of children diagnosed with have a lot of questions and concerns in their mind about the life expentancy, quality of the child's life , medications etc . Many find it hard to come to terms that their child has a rare disease. Therefore it is necessary to counsel them and make them aware of the management of WD so that their child can lead a normal life, he said. It is important to monitor for copper every six months along with yearly sonography to determine clinical and biochemical improvement. Vaccinations for hepatitis A, B and typhoid are important.

Dr. Snehawardhan Pandey talked about that hepatic presentations of WD. He said that liver transplant is suggested when the patient does not respond to medicine and when the liver disease progresses to advanced stage . Genetic tests in siblings of child with WD can be of great help as early diagnosis can lead to better management.

Dr.Jyoti Singhal, Paediatric Nephrologist talked about the involvement of kidneys in WD. She said that this disease can sometimes be characterized kidney stones which can be mostly managed by medicines Excess copper can cause renal tubular dysfunction. About 1 to 6% of WD children may experience kidney problems but this can be managed with proper diagnosis and treatment.

Dr. Abhijit Botre, Paediatric Neurologist, said that neurological presentation in WD is seen in the age group of 8 to 21 years in terms of chorea, tremors , drooling, fits Parkinson's and other movement disorders apart from neurophsychiatric disorders like mood changes, personality changes, depression, insomnia etc. The treatment includes medications along with physiotherapy and speech therapy.

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Smita Kokitkar said that trace mineral copper is useful for various functions in our body. The requirement of copper is .5 to 1 mg in children and 1.5 in adolescents . In patients with Wilson disease we try to restrict the copper to 1- 1.5 mg . For WD patients Vegetarian and Eggeterian diet, food with high fibre content is preferable. Copper utensils, copper containing foods should be avoided. Pre-boiled and filtered water is preferred . A list of foods to be avoided is given to the patients which include foods or milk products which contain Coco powder , organ meat, shell fish, mushrooms, nuts and dry fruits , chocolates etc .

केईएम हॉस्पिटलमध्ये वार्षिक कार्यक्रम

पुणे : विल्सन डिसीज असलेल्या रुग्णांचे नियमित देखभाल आणि वेळेवर निदान व उपचार आणि औषधोपचारातील सातत्य ही या मुलांच्या चांगल्या भविष्याची गुरुकिल्ली आहे, असे मत विविध तज्ज्ञांनी व्यक्त केले. केईएम हॉस्पिटल पुणे तर्फे बुधवारी विल्सन डिसीजने ग्रस्त असलेले रुग्ण आणि त्यांच्या पालकांसाठी वार्षिक कार्यक्रमाचे आयोजन करण्यात आले होते. या दुर्मिळ अनुवांशिक आजाराच्या व्यवस्थापनाबाबत जागरूकता निर्माण करणे आणि नियमित देखभालीचे महत्त्व आत्मसात करणे हा या कार्यक्रमाचा मुख्य उद्देश होता. सुमारे १०० रुग्ण आणि त्यांचे पालक या उपक्रमात सहभागी झाले होते. केईएम हॉस्पिटल पुणे येथील कन्सल्टंट पेडियाट्रिक गॅस्ट्रोएन्टेरोलॉजिस्ट डॉ.आशिष बावडेकर, पेडियाट्रिक हेपॅटोलॉजिस्ट डॉ.स्नेहवर्धन पांडे, पेडियाट्रिक नेफ्रोलॉजिस्ट डॉ.ज्योती सिंघल, पेडियाट्रिक न्युरोलॉजिस्ट डॉ.अभिजित बोत्रे आणि आहारतज्ञ स्मिता कोकितकर यांनी रुग्ण आणि त्यांच्या पालकांशी

केईएम हॉस्पिटल पुणे येथे विल्सन डिसीज असलेल्या रुग्णांचा वार्षिक कार्यक्रम संपन्न

विल्सन डिसीज असलेल्या रुग्णांना चांगल्या जीवनमानाकरिता नियमित देखभाल आणि उपचारांमधील सातत्य महत्त्वाचे : तज्ज्ञ

केईएम हॉस्पिटल पुणे येथे विल्सन डिसीज असलेल्या रुग्णांचा वार्षिक कार्यक्रम संपन्न

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देखभाल और उपचारों में निरंतरता महत्त्वपूर्ण

पुणे, : विल्सन डिसीज के मरीजों को नियमित देखभाल और समय पर निदान व उपचार और दवाइयों में निरंतरता यह इन बच्चों के अच्छे भविष्य की कुंजी है, ऐसा मत विविध विशषज्ञोंने व्यक्त किया.केईएम हॉस्पिटल पुणे की ओर से हालही में विल्सन डिसीज से ग्रस्त मरीज और उनके पालकों के लिए वार्षिक कार्यक्रम का आयोजन किया गया था. इस दुर्लभ अनुवांशिक बीमारी के व्यवस्थापन के बारें में जागरूकता निर्माण करना और

विल्सन डिसीज रुग्णांचा वार्षिक कार्यक्रम

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Annual meeting of Wilson Disease patients held at KEM Hospital, Pune

Pune (Voice news service):- Regular monitoring of patients with Wilson Disease along with early diagnosis and medication is a key to normal future of these children opined various experts . KEM Hospital, Pune recently organized an annual meeting of Wilson Disease and their parents . The

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presentation in Wilson Disease is seen in the age group of 8 to 28 years in terms of chorea , tremors , drooling , fits , Parkinson's and other movement disorders apart from neuropsychiatric disorders like mood changes , personality changes , depression , insomnia etc . The treatment includes medications along with physiotherapy and speech therapy.

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विल्सन डिसीज से बचने देखभाल जरूरी

केईएम हॉस्पिटल की ओर से मरीज और उनके परिजनों के लिए वार्षिक कार्यक्रम

■ पुणे, (सं.) विल्सन डिसीज के मरीजों को नियमित देखभाल और समय पर निदान व उपचार और दवाइयों में निरंतरता यह इन बच्चों के अच्छे भविष्य की कुंजी है, ऐसा मत विविध विशषज्ञों ने व्यक्त किया. केईएम हॉस्पिटल पुणे की ओर से हाल ही में विल्सन डिसीज से ग्रस्त मरीज और उनके पालकों के लिए वार्षिक कार्यक्रम आयोजन किया गया था

विल्सन डिसीजच्या रूग्णांना नियमित देखभाल आणि उपचारांमधील सातत्य महत्त्वाचे : तज्ज्ञ

केईएम हॉस्पिटल पुणे येथे विल्सन डिसीज असलेल्या रुग्णांचा वार्षिक कार्यक्रम संपन्न

पुणे : प्रतिनिधी

विल्सन डिसीज (विडी) असलेल्या रुग्णांचे नियमित देखभाल आणि वेळेवर निदान व उपचार आणि औषधोपचारातील सातत्य ही या मुलांच्या चांगल्या भविष्याची गुरुकिल्ली आहे, असे मत विविध तज्ज्ञांनी व्यक्त केले. केईएम हॉस्पिटल पुणे तर्फे बुधवारी विल्सन डिसीजने ग्रस्त असलेले रुग्ण आणि त्यांच्या पालकांसाठी वार्षिक कार्यक्रमाचे आयोजन करण्यात आले होते. या दुर्मिळ अनुवांशिक आजाराच्या व्यवस्थापनाबाबत जागरूकता निर्माण करणे आणि नियमित देखभालीचे महत्व आत्मसात करणे हा या कार्यक्रमाचा मुख्य उद्देश होता. सुमारे १०० रुग्ण आणि त्यांचे पालक या उपक्रमात सहभागी झाले होते.

केईएम हॉस्पिटल पुणे येथील कन्सल्टंट पेडिअट्रिक गॅस्ट्रोएन्टेरोलॉजिस्ट डॉ.आशिष बावडेकर, पेडिअट्रिक हेपॅटोलॉजिस्ट डॉ.स्नेहवर्धन पांडे, पेडिअट्रिक नेफ्रोलॉजिस्ट डॉ.ज्योती सिंघल, पेडिअट्रिक न्युरोलॉजिस्ट डॉ.अभिजित बोबे आणि आहारतज्ञ मिता कोकिलकर यांनी रुग्ण आणि त्यांच्या पालकांशी संवाद साधला.

डॉ.आशिष बावडेकर म्हणाले की, विल्सन डिसीज ही दुर्मिळ अनुवांशिक स्थिती असून यामध्ये शरीरात विशेषत: यकृत, मेंदू, मूत्रपिंड आणि डोळ्यांच्या पडद्यामध्ये (कॉर्निया) जास्त प्रमाणात तांबे जमा होत जाते. वेळेवर निदान न झाल्यास, कालांतराने मज्जासंस्थेसंबंधी कार्य बिघडणे,लिव्हर सिर्होसिस आणि मेंदूमध्ये असामान्यता निर्माण होऊन समस्या उद्भवू शकतात. सामान्यत: आपले शरीर मुत्राद्वारे अतिरिक्त तांबे काढून टाकू शकते. विल्सन डिसीज हा एटीपी ७बी जनुकातील बिघाडामुळे होतो, जो यकृतातून तांबे बाहेर काढण्यासाठी जबाबदार असतो. विल्सन डिसीजच्या रुग्णांमध्ये अनुवांशिक दोषामुळे, शरीरातील अतिरिक्त तांबे बाहेर पडू शकत नाही आणि त्यामुळे ते शरीरात साठत जाते.

मुख्यतीच्या टप्प्यात निदान झालेल्या मुलांच्या यकृत आर्यमान, मुलांचे चांगले जीवनमान,उपचाराचा खर्च, औषधे इत्यादीबद्दल अनेक प्रश्न आणि चिंता असतात. अनेकांना आपल्या मुलाला दुर्मिळ आजार आहे हेच स्वीकारणे कठीण जाते. त्यामुळे पालकांचे समुपदेशन करून त्यांना विडीच्या व्यवस्थापनाची माहिती करून देणे आवश्यक आहे जेणेकरून त्यांचे मूल सामान्य जीवन जगू शकेल,असे ते म्हणाले. वर्षातून एकदा सोनेडाफीसह दर सहा महिन्यांनी तांब्याबाबत चाचणी करणे महत्वाचे आहे. बाबरोबरच हिपॅटायटीस ए, बी आणि टायफॉइडसाठी लसीकरण करणे महत्वाचे आहे.

डॉ. स्नेहवर्धन पांडे म्हणाले की जेव्हा रुग्ण औषधांना प्रतिसाद देत नाही आणि यकृताचा आजार पुढील टप्प्यात बळावतो, तेव्हा यकृत प्रत्त्यारोपणाचा सल्ला दिला जातो. विडी असलेल्या मुलाच्या भावंडांच्या अनुवांशिक चाचण्या देखील

केईएम हॉस्पिटल पुणे येथे विल्सन डिसीज असलेल्या रुग्णांचा वार्षिक कार्यक्रम संपन्न

पुणे,१२ मे २०२३ : विल्सन डिसीज (विडी) असलेल्या रुग्णांचे नियमित देखभाल आणि वेळेवर निदान व उपचार आणि औषधोपचारातील सातत्य ही या मुलांच्या चांगल्या भविष्याची गुरुकिल्ली आहे, असे मत विविध तज्ज्ञांनी व्यक्त केले. केईएम हॉस्पिटल पुणे तर्फे बुधवारी विल्सन डिसीजने ग्रस्त असलेले रुग्ण आणि त्यांच्या पालकांसाठी वार्षिक कार्यक्रमाचे आयोजन करण्यात आले होते. या दुर्मिळ अनुवांशिक आजाराच्या व्यवस्थापनाबाबत जागरूकता निर्माण करणे आणि नियमित देखभालीचे महत्व आत्मसात करणे हा या कार्यक्रमाचा मुख्य उद्देश होता. सुमारे १०० रुग्ण आणि त्यांचे पालक या उपक्रमात सहभागी झाले होते.

केईएम हॉस्पिटल पुणे येथील कन्सल्टंट पेडिअट्रिक गॅस्ट्रोएन्टेरोलॉजिस्ट डॉ.आशिष बावडेकर, पेडिअट्रिक हेपॅटोलॉजिस्ट डॉ.स्नेहवर्धन पांडे, पेडिअट्रिक नेफ्रोलॉजिस्ट डॉ.ज्योती सिंघल, पेडिअट्रिक न्युरोलॉजिस्ट डॉ.अभिजित बोबे आणि आहारतज्ञ मिता कोकिलकर यांनी रुग्ण आणि त्यांच्या पालकांशी संवाद साधला.

डॉ.आशिष बावडेकर म्हणाले की, विल्सन डिसीज ही दुर्मिळ अनुवांशिक स्थिती असून यामध्ये शरीरात विशेषत: यकृत, मेंदू, मूत्रपिंड आणि डोळ्यांच्या पडद्यामध्ये (कॉर्निया) जास्त प्रमाणात तांबे जमा होत जाते. वेळेवर निदान न झाल्यास, कालांतराने मज्जासंस्थेसंबंधी कार्य बिघडणे,लिव्हर सिर्होसिस आणि मेंदूमध्ये असामान्यता निर्माण होऊन समस्या उद्भवू शकतात. सामान्यत: आपले शरीर मुत्राद्वारे अतिरिक्त तांबे काढून टाकू शकते. विल्सन डिसीज हा एटीपी ७बी जनुकातील बिघाडामुळे होतो, जो यकृतातून तांबे बाहेर काढण्यासाठी जबाबदार असतो. विल्सन डिसीजच्या रुग्णांमध्ये अनुवांशिक दोषामुळे, शरीरातील अतिरिक्त तांबे बाहेर पडू शकत नाही आणि त्यामुळे ते शरीरात साठत जाते.

मुख्यतीच्या टप्प्यात निदान झालेल्या मुलांच्या यकृत आर्यमान, मुलांचे चांगले जीवनमान,उपचाराचा खर्च, औषधे इत्यादीबद्दल अनेक प्रश्न आणि चिंता असतात. अनेकांना आपल्या मुलाला दुर्मिळ आजार आहे हेच स्वीकारणे कठीण जाते. त्यामुळे पालकांचे समुपदेशन करून त्यांना विडीच्या व्यवस्थापनाची माहिती करून देणे आवश्यक आहे जेणेकरून त्यांचे मूल सामान्य जीवन जगू शकेल,असे ते म्हणाले. वर्षातून एकदा सोनेडाफीसह दर सहा महिन्यांनी तांब्याबाबत चाचणी करणे महत्वाचे आहे. बाबरोबरच हिपॅटायटीस ए, बी आणि टायफॉइडसाठी लसीकरण करणे महत्वाचे आहे.

डॉ. स्नेहवर्धन पांडे म्हणाले की जेव्हा रुग्ण औषधांना प्रतिसाद देत नाही आणि यकृताचा आजार पुढील टप्प्यात बळावतो, तेव्हा यकृत प्रत्त्यारोपणाचा सल्ला दिला जातो. विडी असलेल्या मुलाच्या भावंडांच्या अनुवांशिक चाचण्या देखील खूप मदतगार होऊ शकतात, कारण लवकर निदान केल्यास व्यवस्थापन होऊ शकते. डॉ.ज्योती सिंघल म्हणाल्या की, हा आजार असलेल्या कुटुंबांमध्ये काही वेळा मुलखडा होण्याची शक्यता असू शकते, याचे व्यवस्थापन औषधांद्वारे केले जाऊ शकते. जास्त तांबे साठल्यामुळे मूत्रपिंडाच्या नलिकेच्या कार्यात बिघाड होऊ शकते. विल्सन डिसीज असलेल्या सुमारे १ ते ६% मुलांना

केईएम हॉस्पिटल पुणेमध्ये 'विल्सन डिसीज'चा वार्षिक कार्यक्रम संपन्न

विल्सन डिसीजच्या रुग्णांना चांगल्या जीवनमानाकरिता उपचारांमधील सातत्य महत्त्वाचे : तज्ज्ञ

पुणे : विल्सन डिसीज (विडी) असलेल्या रुग्णांचे नियमित देखभाल आणि वेळेवर निदान व उपचार आणि औषधोपचारातील सातत्य ही या मुलांच्या चांगल्या भविष्याची गुरुकिल्ली आहे, असे मत विविध तज्ज्ञांनी व्यक्त केले. केईएम हॉस्पिटल पुणे तर्फे बुधवारी विल्सन डिसीजने ग्रस्त असलेले रुग्ण आणि त्यांच्या पालकांसाठी वार्षिक कार्यक्रमाचे आयोजन करण्यात आले होते. या दुर्मिळ अनुवांशिक आजाराच्या व्यवस्थापनाबाबत जागरूकता निर्माण करणे आणि नियमित देखभालीचे महत्व आत्मसात करणे हा या कार्यक्रमाचा मुख्य उद्देश होता. सुमारे १०० रुग्ण आणि त्यांचे पालक या उपक्रमात सहभागी झाले होते.

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मुख्यतीच्या टप्प्यात निदान झालेल्या मुलांच्या यकृत आर्यमान, मुलांचे चांगले जीवनमान,उपचाराचा खर्च, औषधे इत्यादीबद्दल अनेक प्रश्न आणि चिंता असतात. अनेकांना आपल्या मुलाला दुर्मिळ आजार आहे हेच स्वीकारणे कठीण जाते. त्यामुळे पालकांचे समुपदेशन करून त्यांना विडीच्या व्यवस्थापनाची माहिती करून देणे आवश्यक आहे जेणेकरून त्यांचे मूल सामान्य जीवन जगू शकेल,असे ते म्हणाले. वर्षातून एकदा सोनेडाफीसह दर सहा महिन्यांनी तांब्याबाबत चाचणी करणे महत्वाचे आहे. बाबरोबरच हिपॅटायटीस ए, बी आणि टायफॉइडसाठी लसीकरण करणे महत्वाचे आहे.

डॉ. स्नेहवर्धन पांडे म्हणाले की जेव्हा रुग्ण औषधांना प्रतिसाद देत नाही आणि यकृताचा आजार पुढील टप्प्यात बळावतो, तेव्हा यकृत प्रत्त्यारोपणाचा सल्ला दिला जातो. विडी असलेल्या मुलाच्या भावंडांच्या अनुवांशिक चाचण्या देखील खूप मदतगार होऊ शकतात, कारण लवकर निदान केल्यास व्यवस्थापन होऊ शकते. डॉ.ज्योती सिंघल म्हणाल्या की, हा आजार असलेल्या कुटुंबांमध्ये काही वेळा मुलखडा होण्याची शक्यता असू शकते, याचे व्यवस्थापन औषधांद्वारे केले जाऊ शकते.

KEM Hospital PUNE

Quality and ethics in patient care

EVENTS AND ACTIVITIES

Celebration of International Nurses Day

International Nurses Day is observed each year on May 12 to recognise the dedication and selflessness of nurses around the world who provide care and promote health. This day also coincides with the birth anniversary of Florence Nightingale, the pioneer of modern nursing. Nurses are indispensable caregivers for a prosperous society. The celebration of International Nurses Day is an opportunity to recognise the hard work of nurses, who often work long hours under difficult and stressful conditions to ensure the well-being of their patients.
This year, the theme for Nurses Day was “Our Nurses, Our Future”. This global campaign sets out what we want for nursing in the future in order to address global health challenges and improve global health for all.

On the occasion of Nurses’ Day, we organized various competitions, such as greeting card, poster, art from waste, speech, dance - solo, group, singing, face painting, role play and fashion show. Many nurses participated in these competitions and won prizes.
The programme began with the lighting of the lamp and a prayer for Florence Nightingale, followed by Ganesh Vandana and a unique dance form – last dance was performed by our nursing staff. Students from the School of Nursing performed a skit about Florence Nightingale’s life journey and a role play about the qualities of nursing.

The programme ended with a group song and a vote of thanks given by the Nursing Superintendent, Ms. Neeta Mahankale.

EVENTS AND ACTIVITIES

EVENTS AND ACTIVITIES

A Baby-Mother Get-Together

On the occasion of Mother's Day, the Tata Centre for Reproductive Health organised a Baby-Mother Get-Together. Here are a few highlights from the event:

EVENTS AND ACTIVITIES

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Celebration of World Human Milk Donation Day

This was celebrated on 19th May 2023 by Nectar Human Milk Bank, KEM Hospital, Pune. This event was organised with a vision to spread awareness of the importance of donor human milk in saving the lives of premature and sick infants. As per the WHO guidelines, Pasteurized Donor Human Milk (PDHM) is the second best option after mother's own milk. Research shows that there is a significant fall in mortality and morbidity rate of premature babies when PDHM is used. Exclusive use of human milk for premature babies have immense benefits beyond just nutrition like improving immunity and providing protection against many infections. It also protects the mothers from ill effects of oversupply.

Dr. Madhur Rao, Senior Deputy Medical Administrator and Dr. Tehnaz, Assistant Medical Administrator attended the programme to appreciate all mothers. Dr. Umesh Vaidya, In-charge of NICU explained the role of milk bank and importance of Pasteurised Donor Human Milk in NICU.

The donor mothers were invited and felicitated for their selfless generous contribution towards Nectar Human Milk Bank.

Dr. Janvi Shah, lactation consultant welcomed all and the Donor mothers were awarded with certificates and momento.

A few mothers shared their experiences throughout their journey of donation of milk which inspired others for the same. Dr Rani Balgude, lactation consultant proposed the vote of thanks.

EVENTS AND ACTIVITIES

Congratulations Dr. Neelam Vaid and her team for successfully completing 600 Cochlear Implant surgeries.

EVENTS AND ACTIVITIES

EVENTS AND ACTIVITIES

EVENTS AND ACTIVITIES

Mental Health : An Open Discussion

The five day lecture series about mental health awareness among the State Reserve Police Force (SRPF) was organised by Mrs. Vinita Sahu, Commander In Chief & Dr. Nitin Bhosale, In- charge Medical Officer SRPF Unit 5. Dr. Sanad Pawar, Psychiatrist, KEM Hospital Pune was invited as a speaker.

Positive Mental Health and Resilience

Dr. Sanad Pawar, Psychiatrist, KEM Hospital Pune was invited as a speaker for a Mental Health Awareness Programme Organised by Civil Services Aspirants Club, Government College of Engineering Awasari (Khurd), Tal. Manchar, Dist. Pune.

EVENTS AND ACTIVITIES

Retirement function was held on 5th May 2023

for

Mrs. Savita Gaikwad (Housekeeping Staff)

Mrs. Hirabai Dimbale (Housekeeping Staff)

MEDIA

KEM Hospital initiates study to decrease children's susceptibility to Type 2 diabetes

Vicky Pathare

punelatters@htlive.com

PUNE: Researchers at the city-based KEM Hospital have initiated a study to decrease the children's susceptibility to type 2 Diabetes from the time they are inside their mothers' wombs. According to the researchers, children born to diabetic parents and children who are underweight at birth are genetically very likely to develop type 2 Diabetes in future.

The study titled 'Pune Rural Intervention in Young Adolescents (PRIYA) Follow-up' was started a week ago and includes 200 children (100 boys and 100 girls) aged six to 10 years from the rural parts of Pune. The 557-odd parents of these 200 children are part of the original Pune Rural Intervention in Young Adolescents (PRIYA) programme and were adolescents when it began in 2012 and ended last month.

The Pune Rural Intervention in Young Adolescents (PRIYA) programme aims to reduce the children's susceptibility to type 2 Diabetes since the time they are inside their mothers' wombs by improving nutrition, vitamin and folic supplements, and encouraging expecting mothers to lead a healthy lifestyle.

Dr Chittaranjan S Yajnik, director of the Diabetes unit, KEM Hospital, said that India has a huge diabetic burden and has the highest number of children who are born underweight. "Children born to diabetic parents have a genetic susceptibility to developing type 2 Diabetes through precipitating factors such as a sedentary lifestyle largely linked to increase in age and obesity. Following a healthy lifestyle is not possible for everyone and genetic susceptibility cannot be altered. However, there is scope for controlling the precipitating factors," Dr Yajnik said.

Babies who are underweight at the time of birth are susceptible to type 2 Diabetes in future. The main reason behind children being underweight at the time of birth is malnutrition among the expecting mothers or the foetus receiving inadequate nutrition during the prenatal period.

The levels of vitamin B12 and folic acid during pregnancy also affect the growth of the foetus. Hence, the levels of vitamin B12 and folic acid of the expecting mothers should be controlled during pregnancy. Dr Yajnik said that while genetics, diet and exercise are the precipitating factors, infants will not be susceptible to Diabetes in future if the nutritional health of the expecting mothers improves and they follow a healthy lifestyle.

The PRIYA Follow-up programme will continue for the next two years and the health of the 200 adolescents will be closely monitored. Dr Yajnik said, "The Glucose, Insulin, body fat and development of other significant organs such as the brain, pancreas, kidney etc. will be monitored. Vitamins and folic were given to the mothers of these children before they were born. The weight of these babies at birth was good. Tests were carried out when the babies were two to four years' old and it was found that due to the vitamin B12 given to their mothers, their brain growth is good. Pune Rural Intervention in Young Adolescents (PRIYA) is probably a one-of-its-kind study in adolescents where we are looking for better outcomes in their children."

HIGHLIGHTS OF THE STUDY

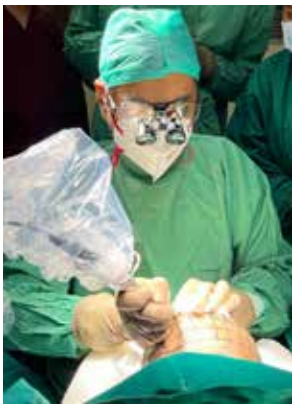
- The study is titled 'Pune Rural Intervention in Young Adolescents (PRIYA)
- Includes 200 children (100 boys and 100 girls) aged six to 10 years from the rural parts of Pune
- The 557-odd parents of these 200 children are part of the original PRIYA programme and were adolescents when it began in 2012 and ended last month
- The study aims to decrease children's susceptibility to Type 2 diabetes by improving nutrition, vitamin and folic supplements and encouraging expecting mothers to lead a healthy lifestyle.

ACHIEVEMENTS

Congratulations!!

On the occasion of the International Nurses Day, KEM Sisters - incharge **VAISHALI UNDE** of Nursing Home and **MANSI GAIKWAD** of PICU were felicitated for their devoted service to humanity. The programme was organised by Maharashtra Andhashradha Nirmulan Samiti (Pune City Branch).

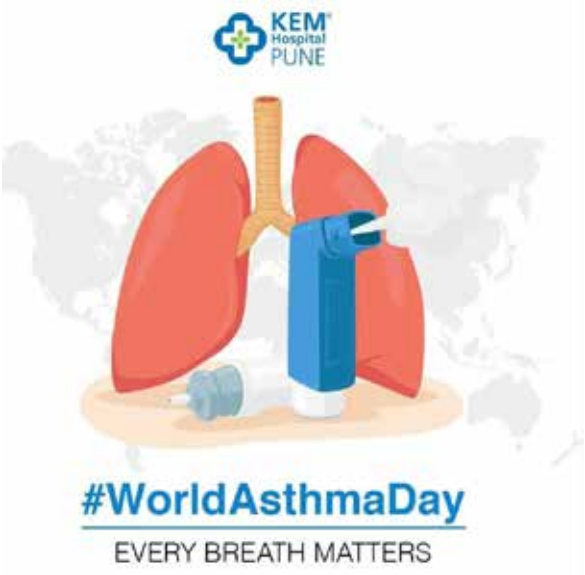
DR. SUCHITRA MOHITE completed the Royal College of Surgeons of Edinburgh's Pre-hospital Care & Trauma Care course held at SRIHER, Chennai from April 19th to 21st, 2023.
With the guidance of Dr. David Bruce, the course leader, it was an intense three-day program that culminated in a qualifying examination.
In addition, Dr. Mohite completed the Faculty of Disaster Management course successfully during the same session. Notably, she passed the examination in her first attempt.



DR. SWARAJ POTDAR, performed the first hair transplant by FUE method in KEM Hospital, Pune.
About 2300 grafts were implanted.
He was supported by Dr. Hanumant and all our enthusiastic students from the dept: Dr. Vijay, Dr. Anupama, Dr. Navodita, Dr Krishna and Dr Namrata.

TEAM KEM

DR. SONIYA ATTHALYE
MD (Homeopathy) Psychiatry
has joined us as a Consultant - Homeopathy.
OPD Timing:
Every Thursday
09:30 AM to 12:30 PM


KEM Hospital PUNE
#WorldAsthmaDay
EVERY BREATH MATTERS


KEM Hospital PUNE
#WorldThalasemmiaDay
BE AWARE. SHARE. CARE.
Strengthening Education to Bridge the Thalassemia Care Gap


KEM Hospital PUNE
Promote positive mental health in your child
BE A ROLE MODEL
How you handle your challenges and uncomfortable feelings influences how your child learns to respond to their own.
LIMIT SCREEN TIME
Don't let electronics get in the way of developing a deep connection with your kids.
STOP HELICOPTERING
Hovering too closely limits your child's development by not letting them learn how to handle disappointment or overcome struggles.
FOCUS ON THEIR HEALTH
Diet, sleep and exercise can affect mood, attention span, anxiety levels and behaviour.
TALK TO YOUR CHILD ABOUT THEIR FEELINGS
Being able to share their feelings without fear and in a healthy, productive way is important for the childs' mental and emotional well-being.
FOCUS ON EFFORT
Praise your child for the effort, not just success, so they develop a positive sense of self even when struggling.
LET THEM KNOW MISTAKES ARE NORMAL
Let your kids see your own errors so they realize everyone makes mistakes sometimes and it doesn't define a person's worth.


#5 of 9
Common symptoms of Schizophrenia
COGNITIVE DIFFICULTIES
Problems with memory, attention and decision making
For more information reach out to us
020 2621 7460 or 020 6603 7460
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HAPPY INTERNATIONAL NURSES DAY
Doctors can't function without them
Hospitals can't run without them
Patients can't smile without them
KEM Hospital PUNE


KEM Hospital PUNE
Prioritising women's health is essential for
• promoting gender equality,
• improving public health, and
• ensuring the well-being of communities.
For more information reach out to us
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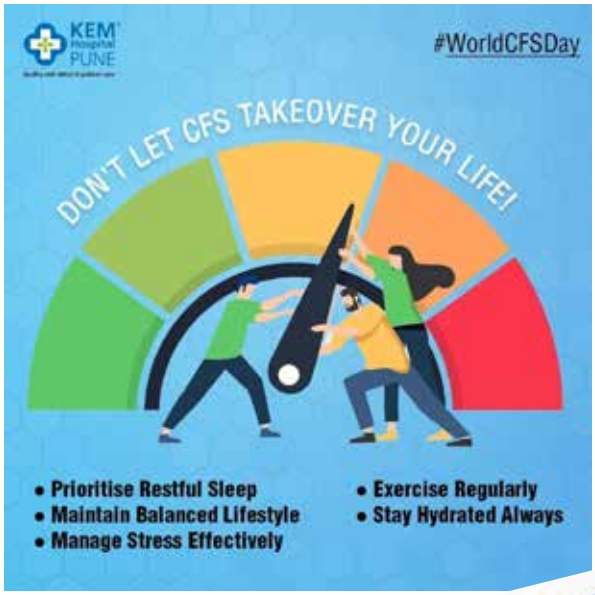
KEM Hospital PUNE
#WorldCFSDay
DON'T LET CFS TAKEOVER YOUR LIFE!
• Prioritise Restful Sleep
• Maintain Balanced Lifestyle
• Manage Stress Effectively
• Exercise Regularly
• Stay Hydrated Always


KEM Hospital PUNE
WORLD
ANTI-TOBACCO DAY
Breathe Free, Break the Chain:
Empowering a Tobacco-Free World


KEM Hospital PUNE
WORLD
MULTIPLE SCLEROSIS DAY
Building Connections,
Inspiring Hope