

Treatment facilities for brain tumours available locally

PROF DR KAZI MANZUR KADER

Brain tumours are the most typical type of solid tumours in children. Also, they affect many adults each year in our country. This disease can affect anyone at any age. So far, we don't know the cause for most brain tumours. This disease and its treatment may result in physical and emotional suffering for the affected and the family.

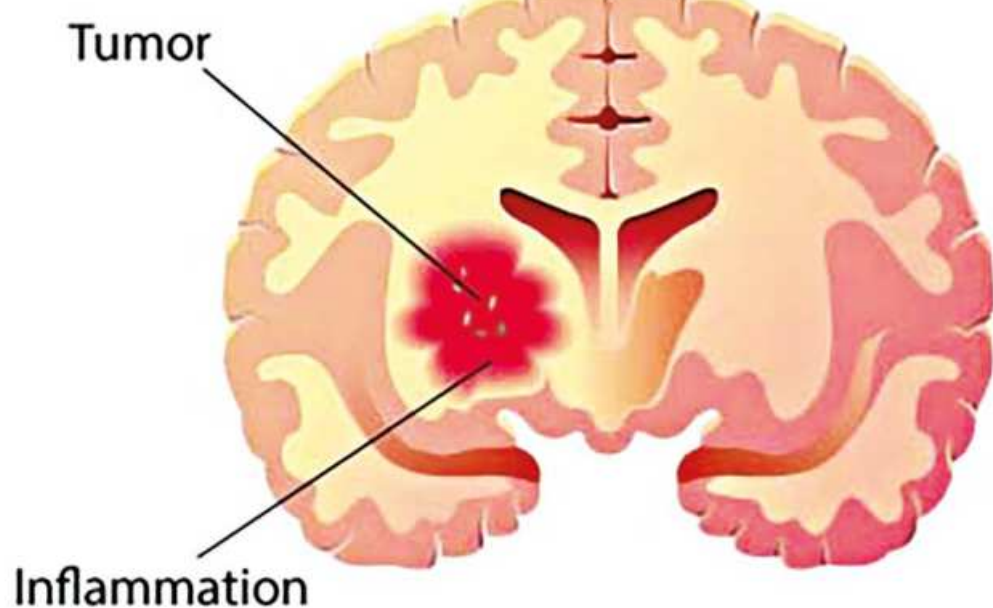
This whole experience of being diagnosed with a brain tumour and then undergoing the treatment is often challenging for the entire family.

Modern management can cure this tumour in some patients and relieve the suffering in most patients.

A mass of abnormal tissue growing in any part of the brain is called a brain tumour. For some unknown reason, some brain cells multiply in an uncontrolled manner. These tumours can arise from any part of the brain, the spinal cord or the nerves.

Broadly these tumours can be divided into benign and malignant tumours. Benign tumours grow slowly and do not spread to other parts. But as they gradually increase in size, they can cause pressure on the normal brain and interfere with mental and body function.

Malignant tumours or cancers are aggressive tumours that grow fast and infiltrate the surrounding brain. Sometimes they spread



to other parts of the brain or spine. With aggressive and timely treatment, some of these can be cured.

Brain tumours cause headaches with or without nausea and vomiting due to the tumour growth within the tight space inside the skull. It causes swelling in the surrounding brain and can cause block the free flow of cerebrospinal fluid. Thus it results in the dilatation of the ventricles - a condition called Hydrocephalus.

Seizures or epilepsy or fits can be caused by the treatment in certain parts of the brain.

A seizure is a sudden jerky movement of one part of the body or a brief loss of consciousness lasting from a few seconds to a few minutes. Limb weakness and abnormal sensation can be a symptom of a tumour in certain part of the brain, especially in and around the motor or sensory cortex. Generally, the opposite side is affected, i.e. right-sided weakness by a tumour in the left motor cortex. Other symptoms are unsteady walking or imbalance; vision may be blurred or lost if the optic nerve is compressed. Recent or long

term memory may become weak, speech problems, changed behaviour, lethargy, drowsiness and loss of consciousness are other symptoms of brain tumour.

Diagnosis can be made by detailed history, medical examinations, CT scan, MRI of Brain, angiogram, CSF test, hormone and blood test, EEG may be done.

Then the tumour tissue removed by surgery or biopsy is processed and stained with special chemical dyes and then carefully examined under the microscope.

Treatment modalities are

1. Surgery, 2. Radiotherapy, and 3. Chemotherapy. Radiotherapy plays a vital role in all malignancies to prevent or delay recurrence; stereotactic radiosurgery (SRS) or stereotactic radiotherapy (SRT) is a specialised type of radiotherapy treatment. This treatment is used for some small tumours at a critical location to give high radiation doses precisely.

To achieve such high precision, a special head frame is fitted on the patient's skull. Then CT, MRI scan and computer planning is done. This treatment is sometimes given as a single treatment (stereotactic radiosurgery) or multiple treatments over many weeks.

Radiation complications are generally mild and manageable - hair fall, loss of appetite or tiredness may occur one to three months following radiotherapy. Many patients feel very lethargic and sleepy due to the radiation. This gradually improves within few months. Suppose a high dose of radiation is given to a large area. In that case, there is about a 5% risk of brain damage (necrosis) due to radiation itself.

Excellent news that all diagnostic and treatment facilities in our country are available. Standard and quality radiotherapy treatment for brain tumours are possible.

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DID YOU KNOW?



Fasting may help ward off infections

Fasting before and during exposure to Salmonella enterica bacteria protects mice from developing a full-blown infection, in part due to changes in the animals' gut microbiomes, according to new research published in PLOS Pathogens by Bruce Vallance and colleagues at University of British Columbia, Canada.

When people or animals develop an infection, they often lose their appetite. However it remains controversial whether fasting protects a host from infection, or increases their susceptibility. In the new study, mice were fasted for 48 hours before and during oral infection with the bacteria Salmonella enterica serovar Typhimurium, a common cause of foodborne illness in people.

Fasting decreased the signs of bacterial infection compared to fed mice, including nearly eliminating all intestinal tissue damage and inflammation.

When fasted animals were re-fed for a day after their fast, there was a dramatic increase in Salmonella numbers and invasion into the intestinal walls, although the associated inflammation was still attenuated compared to normal.

"These data suggest that therapeutic fasting or calorie restriction has the potential to beneficially modulate infectious and potentially non-infectious gastrointestinal diseases," the researchers conclude.

The researchers add, "Our research highlights the important role that food plays in regulating interactions between the host, enteric pathogens and the gut microbiome. When food is limited, the microbiome appears to sequester the nutrients that remain, preventing pathogens from acquiring the energy they need to infect the host."

HEALTH bulletin



Diabetes is associated with a significant increase in the risk of hospitalisation and mortality

A new study published in *Diabetologia* (the journal of the European Association for the Study of Diabetes [EASD]) finds that individuals with diabetes are significantly more likely to be hospitalised and have a greater risk of dying from infections, and this elevated risk is more pronounced in younger adults with diabetes.

The research was conducted by Dr Michael Fang and colleagues at Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA.

Diabetes is widely thought to increase an individual's susceptibility to infection by reducing the effectiveness of the body's immune response. Consistent with this hypothesis, there is an increased likelihood of both common and rare infections in people with diabetes, and more recently the disease has emerged as an important risk factor for adverse outcomes in cases of COVID-19.

The authors conclude that infection prevention and management has become especially important due to the COVID-19 pandemic, as well as the general trend of rising rates of hospitalisation due to infection: two factors which have both disproportionately impacted individuals with diabetes.

Watch for puberty signs in your child and help them out!

DR BEDOWRA ZABEEN

All human beings go through puberty, and no one's experience is exactly alike. During puberty, your body will grow faster than any other time in your life.

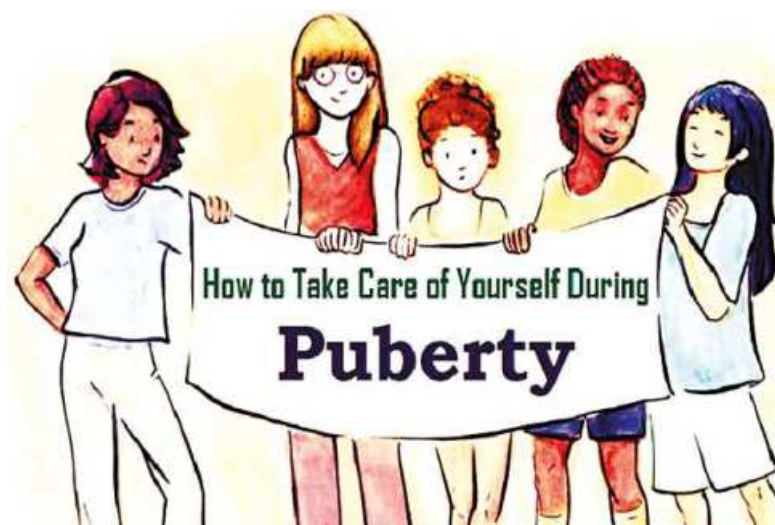
Puberty is the time in life when your child's body becomes sexually mature and transitioning from child to adult. It is when you start to change from being a child to a young adult. It causes physical changes and affects males and females differently. So, how do you know your child is going through puberty? The changes during puberty are physical, sexual, social and emotional. Puberty starts when changes in your child's brain cause sex hormones to be released.

Puberty usually starts around age 10 to 11 (range from 8 to 14 years) for girls. But it can begin as early as age 8; and puberty usually begins around age 11 to 13 (range from 9 to 16 years) for boys. It can start as early as age 9.

Your child will experience many changes in their body over the years.

In girls, the first sign of puberty is usually breast development; then, hair grows in the pubic area and underarms. They may develop acne and eventually experience menstruation (period).

In boys, puberty usually begins with enlargement of the testicles and penis; then, hair grows in the pubic area and underarms. They may develop acne, muscle growth, voice deepening, and facial hair develops as puberty continues.



Your child may experience increased sweat and body odour and a growth spurt (around 11 cm a year in girls and up to 13 cm a year in boys). They also experience sudden mood changes.

How can you help?

Adjusting to puberty can be difficult for both parents and young people. With good communication and support from family and friends, most young people can make this experience more manageable.

Let your child know the changes are normal and help them come out of this different but important time in life. Make your child comfortable enough to share with you when they notice any of the above changes.

As a parent, you can help your child go through puberty by being reassuring, talking positively to

them about what changes are expected.

When to see a paediatric endocrinologist?

Puberty may start earlier or much later. Premature puberty is when physical changes of sexual maturation appear before eight years in girls and nine years in boys. In contrast, delayed puberty is when physical changes of sexual maturation do not appear at 13 years in girls and 14 years in boys.

Remember, puberty is a normal phenomenon that every child goes through. As a parent, you should help them out to sail through puberty without any concern.

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FIFA launches #ReachOut campaign for better mental health

FIFA has launched #ReachOut, a campaign designed to raise awareness of the symptoms of mental health conditions, encourage people to seek help when they need it, and take actions every day for better mental health. With the support of past and current football players, the World Health Organisation (WHO) and the Association of Southeast Asian Nations (ASEAN), FIFA is underlining the importance of greater awareness around mental health.

In launching #ReachOut, FIFA President Gianni Infantino, said: "This campaign is very important in raising awareness about mental health conditions and encouraging a conversation which could save a life. ... Depression and anxiety affect rising numbers of people worldwide, and young people are among the most vulnerable. Having a conversation with family, friends or a healthcare professional can be key."

Depression affects more than 260 million people in the world while around half of all mental health conditions start by age 14. Suicide is the fourth leading cause of death in young people aged 15-29. Among active football players, 23 per cent report sleep disturbance, while 9% have reported depression and a further 7% suffer from anxiety. Among retired players, these figures increase, with 28% struggling to sleep and depression and anxiety affecting 13% and 11% respectively (source: FIFPRO)

Working from home, unemployment, school closures and social isolation have affected people around the world during the COVID-19 pandemic; the challenges for people with mental health conditions, for whom access to treatment has, in many cases, been disrupted, are even greater.

"As the COVID-19 pandemic continues, it is as important as ever to look after our mental and physical health," said Dr Tedros Adhanom Ghebreyesus, Director-General of the World Health Organisation. "WHO is delighted to support the #ReachOut campaign, spearheaded by FIFA to encourage people to talk about their mental health."

Source: World Health Organisation

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Breastfeeding is the cornerstone of infant and young child survival, nutrition, development and maternal health

The World Health Organization recommends exclusive breastfeeding for the first 6 months of life, followed by continued breastfeeding with appropriate complementary food for up to 2 years and beyond

WHO further recommends that mothers with suspected or confirmed COVID-19 should be encouraged to initiate or continue to breastfeed. Mothers should be counselled that the benefits of breastfeeding substantially outweigh the potential risks for transmission

Protect Breastfeeding: A Shared Responsibility

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