

Treating childhood cancer

Cancer is a leading cause of death for children and adolescents worldwide. In high-income countries more than 80% of children with cancer are cured, but in many low and middle income countries (LMICs) only 20% are cured.

The reasons for lower survival rates in LMICs include an inability to obtain an accurate diagnosis, inaccessible therapy, abandonment of treatment, death from toxicity (side effects), and excess relapse, in part due to lack of access to essential medicines and technologies.

Addressing each of these gaps improves survival and can be highly cost-effective.

What causes cancer in children?

Cancer occurs in people of all ages and can affect any part of the body. It begins with genetic changes in a single cell that then grows out of control. In many cancers, this results in a mass (or tumour). If left untreated, cancer generally expands, invades other parts of the body and causes death.

Unlike cancer in adults, the vast majority of childhood cancers do not have a known cause. Many studies have sought to identify the causes of childhood cancer, but very few cancers in children are caused by environmental or lifestyle factors.

Cancer prevention efforts in children should focus on behaviours that will prevent the child from developing preventable



cancer as an adult.

Some chronic infections are risk factors for childhood cancer and have major relevance in low- and middle-income countries. For example, HIV, Epstein-Barr virus and malaria increase the risk of some childhood cancers. Other infections can increase the child's risk of developing cancer as an adult, so it is important to be vaccinated and pursue other methods such as early diagnosis or screening to decrease chronic infections that lead to cancer, whether in childhood or later.

Early diagnosis

When identified early, cancer is more likely to respond to effective treatment and result in a greater probability of survival, less suffering, and often less expensive and less intensive treatment. Significant improvements can be made in the lives of children with cancer by detecting cancer early and avoiding delays in care.

Screening is generally not helpful for childhood cancers. In some select cases, it can be considered in high-risk populations.

Treatment

A correct diagnosis is essential to treat children with cancer because each cancer requires a specific treatment regimen that may include surgery, radiotherapy, and chemotherapy. Access to effective diagnosis, essential medicines, pathology, blood products, radiation therapy, technology and psychosocial and supportive care are variable and inequitable around the world.

Palliative care

Palliative care relieves symptoms caused by cancer and

improves the quality of life of patients and their families. Not all children with cancer can be cured, but relief of suffering is possible for everyone. Pediatric palliative care should be appropriately considered as a core component of comprehensive care starting when illness is diagnosed, and continued regardless of whether or not a child receives treatment with curative intent.

Source: World Health Organisation

HEALTH bulletin



Weight loss can put type 2 diabetes into remission

In 2017, the landmark Diabetes Remission Clinical Trial (DIRECT) revealed that type 2 diabetes can be reversed in some adults by following an intensive weight management programme, but no-one knew why.

Now, new research being presented at this year's European Association for the Study of Diabetes (EASD) Annual Meeting suggests that remission is dependent on whether insulin-producing beta cells in the pancreas are able to recover and function normally.

The finding challenges current medical consensus that beta-cell function is irreversibly lost in people with type 2 diabetes.

The study led by Professor Roy Taylor from Newcastle University in the UK provides further evidence that losing fat from around the liver and pancreas is key to putting type 2 diabetes into remission, but suggests that remission can only be achieved if it results in improved function of pancreatic beta cells so they can restart their insulin production.

Insulin is a hormone produced by beta cells in the pancreas that helps glucose in the blood enter cells in the muscle, fat, and liver to be used as energy.

Paralysed patients able to walk following epidural stimulation

STAR HEALTH REPORT

Two recent separate studies report successes with epidural electrical stimulation in helping paralysed patients regain the ability to walk.

As reported in the New England Journal of Medicine, researchers enrolled four patients who experienced spinal cord injuries roughly 3 years earlier. The patients had no motor abilities (ability to cause a predetermined movement outcome) below the level of their injuries; two of the patients retained some sensation.

Patients had an epidural stimulator implanted over spinal

segments L1 to S1-S2 (at the level of loin and adjacent lower). They then underwent months of daily physical therapy with the stimulator turned on.

The two patients with sensation regained the ability to walk with assistance after 15 and 85 weeks. The other two could stand independently and perform some tasks on a treadmill but were not able to walk over ground. One patient fractured a hip during training.

Next, in Nature Medicine, researchers report outcomes in a man with complete loss of sensation and motor function below the level of the spinal cord injury. The

patient had an epidural stimulator implanted below the level of injury and underwent 43 weeks of training. He regained the ability to walk about 100 meters over ground with assistance. The research team called the results "highly significant."

Patients were unable to walk when the stimulator was turned off. There have been previous trials with this treatment. But in this latest round of experiments, two of the four patients that received the implants and training actually regained the ability to walk — the first time that this treatment has made that possible.



The groundbreaking treatment involves an implant that delivers electrical stimulation directly to the spinal cord.

MENTAL HEALTH

Invest more for mental health

Adolescence and the early years of adulthood are a time of life when many changes occur, for example changing schools, leaving home, and starting university or a new job. For many, these are exciting times. They can also be times of stress and apprehension however. In some cases, if not recognised and managed, these feelings can lead to mental illness.

The expanding use of online technologies, while undoubtedly bringing many benefits, can also bring additional pressures, as connectivity to virtual networks at any time of the day and night grows. Many adolescents are also living in areas affected by humanitarian emergencies such as conflicts, natural disasters and epidemics. Young people living in situations such as these are particularly vulnerable to mental distress and illness.

Half of all mental illness begins by the age of 14, but most cases go undetected and untreated. In terms of the burden of the disease among adolescents, depression is the third leading cause. Suicide is the second leading cause of death among 15-29-year-olds. Harmful use of alcohol and illicit drugs among adolescents is a major issue and can lead to risky behaviours such as unsafe sex or dangerous driving.

Prevention begins with being aware of and understanding the early warning signs and symptoms of mental illness. Parents and teachers can help build life skills of children and adolescents to help them cope with everyday challenges at home and at school. Psychosocial support can be provided in schools.

Investment by governments and the involvement of the social, health and education sectors in comprehensive, integrated, evidence-based programmes for the mental health of young people is essential. This was the focus for this year's World Mental Health Day on October 10, 2018.

A simpler solution with once-daily dosing and reduced risk of nocturnal hypoglycaemia

STAR HEALTH DESK

When treated with once-daily Ryzodeg®, people with type 2 diabetes achieved similar blood sugar control with half the number of daily injections, significantly lower total daily insulin dose and significantly reduced risk of nocturnal hypoglycaemia in the Step by Step trial compared with once-daily insulin glargine U100 plus once-daily insulin aspart after 26 weeks — says a press release.

Ryzodeg® is a combination of insulin degludec and insulin aspart (IDegAsp) in one pen for the treatment of people with type 2 diabetes. The results from the Step by Step trial were presented at the 54th Annual Meeting of the European Association for the Study of Diabetes (EASD 2018) in Berlin, Germany.

"These trial results show that once-daily IDegAsp can offer people with type 2 diabetes a much simpler option with fewer injections compared with insulin glargine U100 plus insulin aspart, to achieve effective blood sugar control," said Dr Athena Philis-Tsimikas, Step by Step lead investigator and corporate vice president, Scripps Whittier Diabetes Institute.

"Hypoglycaemic episodes, especially at night, are often frightening for people with diabetes. Not only does once-daily Ryzodeg® offer a much simpler solution but it also significantly reduces the risk of nocturnal hypoglycaemia compared with basal-bolus treatment," said Mads Krogsgaard Thomsen, executive vice president and chief science officer of Novo Nordisk. "By reducing the number of daily injections, we hope that Ryzodeg® can help reduce the burden of diabetes, and make it easier for people with diabetes to comply with treatment and help them towards achieving better outcomes."

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International Infection Prevention Week (IIPW)

14-20 October 2018

International Infection Prevention Week (IIPW) is right around the corner. The 2018 theme: **Protecting Patients Everywhere.**

By joining your colleagues and healthcare facilities in celebrating IIPW, you are raising awareness of the role infection prevention plays to improve patient/client/resident/consumer safety.



In Search of Excellence

