

Prolonged disability due to post chikungunya arthritis

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Chikungunya is a viral disease that spread by the bite of infected mosquitoes. It is a debilitating but usually non fatal disease. The disease was first reported from Tanzania in 1952. Chikungunya is a Makonde word in Tanzania meaning "to walk bent over". It was found that the disease primarily occurred among people residing in the urban and peri-urban areas of those countries. It spreads by the bite of mosquito *Aedes aegypti*. Human are thought to be the major source or reservoir of chikungunya virus. The mosquito usually transmits the disease by biting an infected person and then biting someone else. An infected person can not spread the infection directly to other persons. *Aedes aegypti* mosquitoes bite usually during the day time. Following an incubation period of usually 2-7 days, it causes acute symptomatic illness like fever, skin rashes and often incapacitating arthralgia. While less common manifestation of the illness like gastrointestinal disorder, haemorrhagic manifestation and neurologic complications such as meningoencephalitis and seizure may also occur.



In most cases symptoms will resolve in 2 weeks. However, as many as 88% of patient can have arthralgia lasting for 1 month, but in approximately 12% cases, arthralgia can progress to a severe chronic and disabling rheumatic and musculoskeletal disorder that can last from months to many years.

Any polyarticular inflammatory features persisting more than 3 months after chikungunya infection must suggest the potential for diagnosis of post chikungunya chronic inflammatory rheumatism. Morning stiffness probably has a lower diagnostic value due to its high prevalence in post chikungunya illness, whereas

synovitis and tenosynovitis are highly indicative of Chronic Inflammatory Rheumatism (CIR). The causal relationship of development of chronic arthralgia following chikungunya infection has not yet been established. But potential causes of chikungunya virus induced musculoskeletal disorder have been postulated

which includes:

- Persistence of virus in and around joints
- Induction of autoimmune disease process by viraemia
- Exacerbation of preexisting joint disease

The spectrum of rheumatic and musculoskeletal disorder are wide and include multiple tendinitis and tenosynovitis, plantar fasciitis, mechanical imbalance in susceptible joints, tunnel syndromes, oedematous polyarthralgia, rheumatoid arthritis and psoriatic arthritis. The musculoskeletal disorder in some cases may even be diffuse in nature. A small group of such patients develop (around 5%) rheumatoid arthritis. While any joint can be affected, the most commonly reported are the distal joints of extremities such as wrist, metacarpal and interphalangeal joints as well as ankle and metatarsophalangeal joints. In some patients, knee joints are also commonly involved. The chikungunya virus also seems to suppress the host immune responses, thereby contributing to chronicity of the disease.

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CME

Late stage cancer remission technology

Praava Health, a health startup focusing on patient-centric care, organised a seminar yesterday on the breakthrough CAR T Cell Therapy — Lasting Remission in Late Stage Cancers at its recently-inaugurated family health centre.

Dr Rana Quraishi, the Director of New Ventures at the University of Maryland, Baltimore, was the keynote speaker at the event, which was facilitated by cancer immunologist and Praava's Senior Director of Cancer Diagnostics, Dr Zaheed Husain, under whose leadership Praava is introducing Bangladesh's first molecular cancer diagnostics (Polymerase Chain Reaction, or PCR) lab for breast cervical, colorectal, and lung cancers.

The seminar, organised by Praava Health as part of a series of continuing medical education (CME) sessions aimed at providing information on cutting-edge medical innovations as well as topical health issues, was attended by medical health professionals and cancer researchers from across the country.

At the seminar, Dr Quraishi presented on CAR T Cell (chimeric antigen receptor T-cell) therapy, a new type of cancer treatment that involves harvesting T cells — a type of immune system cell — from the blood, reprogramming them genetically to find and destroy cancer cells and then returning the immune cells to the patient.

So far the therapy has been used on patients with blood cancers such as leukaemia, and lymphoma who have exhausted all other treatment alternatives. New cancer therapies are gaining importance for Bangladesh, where cancer is the sixth leading cause of death. New therapies such as CAR T Cell highlight the importance of accurately diagnosing these markers. Molecular cancer diagnostics is playing a crucial role in the early detection of cancer markers and identification of effective treatments. Praava Health is thrilled to be bringing the latest technology in molecular cancer diagnostics to Bangladesh.

HEALTH bulletin



Men may have a biological clock too

While scientists and doctors have long known that a woman's chances of having a child drop the older she gets, a new study suggests that a man's age can affect a couple's chances as well. According to a new study out of Beth Israel Deaconess Medical Centre and Harvard Medical School, the incidence of live birth declines significantly as men grow older.

The study analysed 19,000 in-vitro fertilisation (IVF) cycles in 7,753 couples at an IVF centre between 2000 and 2014, according to a press release from the European Study of Human Reproduction and Embryology.

"Declining sperm quality certainly plays some role, but our work shows that this is not the whole picture," says the lead researcher. "We found similar results among couples with no documented male infertility, so something else is happening." Researchers divided participants into four age groups: under 30, 30-35, 35-40, and 40-42. They found that the younger the man was on average, the better the woman's chances of successful birth. For example, women under 30 had a 73% success rate with IVF if their partners were between 30 and 35.

Screening reduces mortality for detectable type 2 diabetics

Studies published in *Diabetologia* (the journal of the European Association for the Study of Diabetes) show that screening for type 2 diabetes and cardiovascular risk factors may not reduce mortality and cardiovascular disease in the general population. However, for individuals diagnosed with diabetes, screening is associated with a reduction in mortality and cardiovascular disease risk.

Health checks including diabetes risk assessment have been introduced in a number of countries. However, there are few population-based trials assessing the benefits and harms of these screening programmes, and these have shown mixed results.

The researchers found that in the overall populations in the screening and no-screening groups, a single round of screening for type 2 diabetes and cardiovascular risk assessment was not associated with a reduction in mortality or in cardiovascular events between 2001 and 2012. Similarly, rates of cardiovascular, cancer or diabetes-related mortality were not reduced by invitation to screening.

The authors note that as only 10% of individuals with diabetes in the screening group were actually diagnosed by screening, it is likely that the programme had wider effects in this cohort. For example, general practitioners in the screening group may have provided lifestyle advice and delayed develop-



ment of diabetes among those found to be at risk. They may also have increased vigilance and the likelihood of early detection even after screening. Healthy behaviour change might also have impacted the findings — for example one third of screen-detected individuals reported that they had stopped smoking at five-year follow up, and this cohort lost an average of 2 Kg in weight.

The authors suggest that benefits to the general population might be increased by identification of non-attendees, targeting of screening to those at greatest risk, strategies to maximise uptake of screening, use of repeated rounds of screening, and optimal treatment of detected disease.

The authors, led by Dr Adina Feldman and Professor Olov Rolandsson from the VPCAM collaboration between the University of Cambridge, UK, and

Umeå University, Sweden, say: "We found that individuals with screen-detected diabetes were diagnosed on average 4.6 years earlier than those who were clinically-detected, and that when followed up after their diagnosis, they had markedly lower rates of all-cause mortality, CVD, renal disease and retinopathy. Although we cannot fully disentangle the contribution of length time bias in particular, these data suggest a positive effect on survival and health outcomes if diabetes is detected earlier through screening than it would have been in clinical practice."

Researchers conclude: "Screening appears to offer beneficial effects for all those diagnosed with diabetes, regardless of whether they were screen detected or clinically diagnosed but this benefit is too small to have an impact on overall population risk of heart disease and stroke, for example, or on early death."

Cancer-fighting super foods

All the studies on cancer and nutrition point to eating plant-based foods for their phytonutrients and other special compounds. Aim for five to nine daily servings of all kinds of fruits and vegetables — especially these six superstars.

Broccoli: All cruciferous vegetables contain cancer-fighting properties, but broccoli is the only one with a sizable amount of sulforaphane, a particularly potent compound that boosts the body's protective enzymes and flushes out cancer-causing chemicals. Broccoli helps fight breast, liver, lung, prostate, skin, stomach, and bladder cancers.

Berries: All berries are packed with cancer-fighting phytonutrients. But black raspberries, in particular, contain very high concentrations of phytochemicals called anthocyanins, which slow down the growth of premalignant cells and keep new blood vessels from forming (and potentially feeding a cancerous tumour). Berries help fight colon, oesophageal, oral, and skin cancers.

Tomatoes: This juicy fruit is the best dietary source of lycopene, a carotenoid that gives tomatoes their red hue. Lycopene was found to stop endometrial cancer cell growth in a study in *Nutrition and Cancer*. Tomatoes help prevent endometrial, lung, prostate, and stomach cancers.

Walnuts: Walnut's phytosterols have been shown to block oestrogen receptors in breast cancer cells, possibly slowing the cells' growth. Walnuts may help to ward off breast and prostate cancers.

Garlic: Phytochemicals in garlic have been found to halt the formation of nitrosamines, carcinogens formed in the stomach and in the intestines when you consume nitrates, a common food preservative. Research found that women with the highest amounts of garlic in their diets had a 50% lower risk of certain colon cancers than women who ate the least.



Typhoid Fever increases up to 45%

Symptoms

- Poor appetite and lethargy
- Fever, as high as 104 degrees Fahrenheit
- Abdominal pain
- Diarrhoea or constipation
- Headaches
- Generalised pains and aches

Management

- Maintain good hygiene
- Drink boiled water
- Wash hand before eating and handling food
- Eat foods that have been thoroughly cooked
- Get vaccinated against typhoid fever
- Maintain Proper sanitation
- Consult with Doctor

