Study established poor oral health as risk factor for oral HPV infection

According to the Centers for Disease Control and Prevention, HPV is the most common sexually transmitted virus in the U.S. (Photo: dream designs/Shutterstock)

HOUSTON, USA: Although human papillomavirus (HPV) infection has been increasingly associated with a rising number of cancers of the oropharynx worldwide, no study has examined the role of oral health in oral HPV infection to date. Now, researchers from the U.S. have found that people with poor oral health and those with an oral disease are significantly more likely to contract oral HPV infections.

The study involved 3,439 participants aged 30 to 69 for whom data on oral HPV and oral health were available from the nationally representative 2009–2010 National Health and Nutrition Examination Survey. By analyzing the data, researchers at the University of Texas Health Science Center at Houston found that study participants who reported poor oral health had a 56 percent higher prevalence of oral HPV infection. Those with periodontal disease or related dental problems had a 51 percent and a 28 percent higher prevalence, respectively. In addition, the researchers found a link between the number of teeth lost and oral HPV infection.

The findings suggest that poor oral health is an independent risk factor of oral HPV infection, irrespective of smoking and oral sex practices, the scientist said. “Public health interventions may aim to promote oral hygiene and oral health as an additional measure to prevent HPV-related oral cancers,” they concluded. However, further research is needed to provide a better understanding of this relationship.

According to the researchers, oral HPV infection is the cause of 40 to 80 percent of oropharyngeal cancers. Oropharyngeal cancer was a relatively uncommon cancer, traditionally associated with heavy tobacco smoking and heavy alcohol consumption. However, over the past few decades, its occurrence has increased dramatically in many parts of the world, especially in Europe and North America, and in young adults in particular. Previous studies have already suggested that this increase is due to the growing number of HPV infections.

The study, titled “Examining the Association Between Oral Health and Oral HPV Infection,” was published online on Aug. 21 in the Cancer Prevention Research journal ahead of print.

Researchers identify role of mouth cells in Candida infection

C. albicans is a common fungus living in and on many parts of the human body. It can colonise and infect individuals with compromised immune systems. (Photo: Andre Nuttel/Shutterstock)

LONDON, UK: Candida albicans is a species of yeast that causes a number of infections in the human body. In addition to causing oral thrush and sore mouth, these micro-organisms can lead to serious illness or death. New research that provides a better understanding of how mucosal surfaces in the mouth respond to C. albicans to prevent tissue damage was presented recently.

The study was conducted by researchers at King’s College London. In laboratory tests, they exposed oral epithelial cells, a mucosal layer of cells that line the mouth, providing a barrier against microbes, to C. albicans in vitro and looked at particular gene expressions 6 and 24 hours after infection.

The phosphoinositide 3-kinase pathway, a molecular signalling pathway, was activated about 5 minutes after the specimen had come into contact with C. albicans, preventing the fungus from invading. The researchers suggested that the pathway is involved in priming epithelial cells to prevent future damage.

The researchers believe that the pathway may be an attractive target for new therapeutics. By boosting its activity, it may be possible to reduce tissue damage, suggested Dr David Moyes, research associate at the college.

According to the researchers, Candida infections are the third-most commonly acquired blood-borne infections, resulting in an estimated 50,000 deaths annually.

Moyes presented the findings at the Society for General Microbiology’s Autumn Conference, which finishes today at the University of Sussex.

Thailand wins bid for 2015 FDI Annual World Dental Congress

Bangkok, Thailand/Istanbul, Turkey: For the third time in five years, the Annual World Dental Congress of the FDI World Dental Federation will be held in an Asian country. An agreement between the Geneva-based dentists’ organisation and the Dental Association of Thailand (DTA) to organise the 2015 edition in Bangkok was signed last week at this year’s FDI congress in the Turkish capital of Istanbul, Dental Tribune ONLINE has learned.

It will be the first time that the South-East Asian country will host the prestigious international dental event. According to DTA President-elect Dr Adirek S. Wongsa, who spoke to Dental Tribune on Friday, his organisation has bid to host the congress in Thailand each year since 1999. It will be a unique event that will not only highlight the rapid development of dentistry in Thailand, but also bring all professions in dentistry together, he said. Preparations have already commenced and more information will be released in the upcoming months.

The congress in Bangkok will follow the 2014 edition, which is being organised by the Indian Dental Association and hosted in New Delhi. The FDI’s most recent congresses in Asia were held in Hong Kong and Singapore. The Korean Dental Association won the bid to organise this year’s congress in Seoul in South Korea but the event there was cancelled, and hosted instead by the Turkish Dental Association last week in Istanbul.

The DTA is currently organising its own dental event, the Thailand International Dental Congress, to be held in November this year. According to Wongsa, the event attracts around 3,000 dental professionals each year. Thailand has a workforce of 12,000 dentists.