Head and neck cancer: New system simplifies treatment planning

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LEIPZIG, Germany: Doctors and computer scientists from Leipzig in Germany have deve loped a system that makes it easier to plan treatment for head and neck cancer. The multime dia system collates patient data and processes it for use by the treating physicians.

The head and neck cancer mortality rate is high. In Europe, only four out of ten patients survive the first five years after diagnosis.

Researchers at the University of Leipzig are well aware of these figures. “In recent years, we have treated more patients than ever before, yet the chances of survival are still the same,” said Dr Andreas Boehr, chief physician at the Department of Otolaryngology. This observation motivated the development of the new program.

Once a week, the doctors involved in the treatment of patients suffering from head and neck cancer meet for about half an hour and confer about what treatment is appropriate in each case.

“In order to make the right decision, we need to do more than simply look at the patient and say ‘we’ll do this and that,’” said Prof. Andreas Dietz, director of the Department of Otolaryngology. “We have to obtain the most accurate diagnosis and offer the optimal treatment. If the first treatment attempt is not successful, the patient could be negatively affected.”

According to Dietz, treatment of head and neck tumours worldwide is not generally interdisciplinary. The doctors in Leipzig however adopt a different approach: ENT-specialists, oncolo gists, pathologists, radiologists and surgeons all take part in the weekly tumour board review.

A new software program called Oncoflow, which was developed by ENT doctors and computer scientists from the Innovation Center Computer-Assisted Surgery at the University of Leipzig, simplifies the decision-making process for tumour board reviews significantly. Among other functions, the program processes lab results, test results, medical reports and image data from X-ray, MRI and CT scans. Together with other data, this is combined into 3-D tumour models. The program also calculates the size and extent of the tumour.

Previously, data was stored in various places. Bringing it together in one system provides an overview for tumour board reviewers. A special function enables the doctors to vote for the appropriate treatment with a re mote after the presentation. The aim of voting is not to come to a democratic decision, but to aid decision-making, according to Dietz. Oncoflow not only simplifies treatment planning, but also documents the process of decision-making; thus, the data is stored long term and can be retrieved.

Smile contributes most to first impressions, survey shows

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CHICAGO, Ill., USA: The findings of a new study suggest that using a germ-killing mouthwash in addition to regular tooth brushing provides greater oral health benefits than toothbrushing alone. Study participants who rinsed their mouth twice a day reduced plaque and gingivitis significantly.

The study was conducted among 159 US adults diagnosed with mild to moderate plaque and gingivitis, who were divided into two groups. While members of the first group brushed their teeth and rinsed with an antimicrobial mouthwash twice a day, members of the second group used a placebo mouthwash.

After six months, the researchers observed that participants in the first group had reduced their dental plaque by up to 26.3 per cent.

In addition, the study found that almost 100 per cent of the participants using the antimicrobial mouthwash showed a reduction in gingivitis, compared with only 30 per cent in the placebo group. Overall, members of the antimicrobial mouthwash group had a 20.4 per cent reduction in gingivitis, said Dr Janice Pliszczak, representative of the Academy of General Dentistry.

According to the study’s authors, mouthwash can reach nearly 100 per cent of the mouth’s surface, while toothbrushing affects only 25 per cent. By using a germ-killing mouth rinse twice a day in addition to one’s daily brushing routine, a person can effectively target oral bacteria usually left behind, they concluded.

The study was published in the January/February issue of General Dentistry, the journal of the Academy of General Dentistry.