Wakeup call to manage oral cancers in India

Devendra K Gupta

Vice Chancellor, CSM Medical University (Former King George's Medical University), Lucknow, India.

Dr. Devendra K Gupta

India is a pluralistic, multilingual, multiethnic society and home to a diversity of religions. It is a vast democratic country with a population of <1.2 billion people and is increasing at a 2% annual rate. By 2030, India is expected to surpass China as the world's most populous nation. The Indian subcontinent was once identified with its commercial and cultural wealth, the ancient

Indus valley civilization, historic trade routes, and vast empires. India has once again become one of the fastest growing major economies. Emergence of India as a destination for medical tourism leverages the country's well educated, English-speaking medical staff, state-of-the-art hospitals and diagnostic facilities, and relatively low cost to address the spiraling healthcare costs of the Western world. India provides best-in-class treatment, in some cases at less than one-tenth the cost incurred in the developed nations. However, it continues to face the challenges of poverty, illiteracy, and inadequate public healthcare.

Apart from diarrhea, malnutrition, trauma, infectious and chronic degenerative diseases, diabetes, hypertension, obesity, and psychiatric diseases are posing major challenges to the healthcare delivery system in India, inviting the attention of the government and increase the health budget substantially in the next 5-year plan. Some communicable diseases such as dengue, viral hepatitis, tuberculosis, malaria, and pneumonia, which were once thought to be under control, have returned in force. India is also grappling with diseases such as AIDS. The use of tobacco and smoking are common, particularly in eastern states of India. Tobacco is the most important identified cause of oral

cancer and responsible for about 40–50% of cancers in men and 20% in women. There are about 0.7 million new cases of cancers every year in India, of which 0.3 million are tobacco-related. According to the World Health Organization report, about 2000 deaths per day in India are tobacco-related.

There are around 50 physicians per 100,000 Indians. India's physical infrastructure is woefully inadequate to meet the healthcare demands. While India has several centers of excellence in cancer healthcare delivery, these facilities are mostly limited only in urban areas. India needs 74,150 community health centers per million population but has less than half of that. Despite major advances in the molecular pathology, excision surgery and reconstructive procedures for oral cancer, there remain numerous gaps. Oral squamous cell carcinoma appears to have a multifocal character, with only half of them developing on the same site as a previous leukoplakia. Complex molecular mechanisms are implicated and the identification of a single marker to predict outcomes in all oral cancer remains a difficult challenge. Among reported markers are those for oncogene activation, for example, *ras*, *epidermal growth factor receptor (EGFR)*, *proline-rich region attachment domain (PRAD)-1*, *int-2*, and for inactivation of tumor suppressor genes, notably *p53*, *retinoblastoma protein (pRB)*, and *inhibitor of cyclin-dependent kinase 4 (INK4)*. Their study may contribute to the search for reliable molecular markers of the development of oral cancer. India has the potential to conduct such research and clarify the role as well as clinical significance of these molecular changes, allow them to be used as effective diagnostic and prognostic markers to improve the management of these patients.

It is a great pleasure that the *Journal of Oral Biology and Craniofacial Research* has been launched recently not only to highlight the subject but also to give a platform for the academicians and researchers to publish their scientific thoughts and work. I would very much like the Indian and other contributors to put forward their work and present them before the world through this journal. With all my best wishes for the continued success and the publication of the journal.