Scientists warn dental x-rays increase cancer risk

Dental x-rays can increase the risk of thyroid cancer, according to scientists in a new study

A research team from Brighton and Cambridge and Kuwait studied 513 thyroid cancer patients in Kuwait where the numbers of thyroid cancer are relatively high compared with Britain.

The researchers asked the cancer patients and a similar number of healthy volunteers how many dental x-rays they had had. After factoring in hospital x-rays, they found that men and women who had had up to four dental x-rays were more than twice as likely to have developed the disease than those who had never had any. Between five and nine x-rays and their risk rose more than four-fold.

However, the researchers warned that the results of their study ‘should be treated with caution’ because the data was based on self-reporting by the participants as comprehensive historical dental x-ray records were not available from the clinics. The researchers are now calling for further investigation as currently guidelines state that low-dose radiation exposure through dental radiography is safe.

Dr Anjum Memon, senior lecturer and consultant in public health medicine at Brighton and Sussex Medical School, who led the study, said: “The public health and clinical implications of these findings are particularly relevant in the light of increases in the incidence of thyroid cancer in many countries over the past 50 years. It is important that our study is repeated with information from dental records in cluding frequency of x-rays, age and dose at exposure.”

“If the results are confirmed then the use of x-rays as a necessary part of evaluation for new patients, and routine periodic dental radiography (at six-month intervals), particularly for children and adolescents, will need to be reconsidered, as will a greater use of lead collar protection.”

He added: “Our study highlights the concern that like chest (or other upper-body) x-rays, dental x-rays should be prescribed when the patient has a specific clinical need, and not as part of routine check-up or when registering with a dentist. The notion that low-dose radiation exposure through dental radiography is absolutely safe needs to be investigated further, as although the individual risk, particularly with modern equipment is likely to be very small, the proportion of the population exposed is high.”

Dr Memon claimed the findings were consistent with previous reports of increased risk of thyroid cancer in dentists, dental assistants and x-ray workers, suggesting multiple low-dose exposures in adults may be important.