Prevalence of Werner’s syndrome heterozygotes in Japan
Misako Satoh, Mitsunobu Imai, Masanobu Sugimoto, Makoto Goto, Yasuhiro Furuchi

Werner’s syndrome is an autosomal recessive disease that causes premature ageing accompanied by an increased susceptibility to cancer. The causative gene (WRN) codes for a DNA helicase. Worldwide, 1200 patients have been reported in 1904 to 1996; 845 from Japan. Patients are distributed all over Japan. But how widely distributed is the mutated WRN gene in the general population?

We previously analysed the mutation in 63 patients with Werner’s syndrome, and found that among 126 chromosomes, 65 (51·6%) chromosomes had mutation 4 and 22 (17·5%) had mutation 6; 2 had other mutations. We focused on mutations 4 and 6. DNA extracted from the blood of 1000 apparently healthy, unlinked anonymous volunteers in Kanagawa prefecture of Japan were analysed for mutations 4 and 6 by a method developed by us. Kanagawa prefecture is near Tokyo with a very mobile population and is considered to be a mix from various parts of Japan, like Tokyo. Mutation of positive DNAs was confirmed by the sequence of the PCR products around the mutation sites.

In these volunteers, we found six DNA samples with mutation 4 at one allele alone, but none with mutation 6. The prevalence of heterozygotic carriers with any one of the mutations 4 or 6 of WRN was estimated to be six per 1000 (95% exact mid-p CI: 2·4 to 12·5). If the other mutations of WRN in patients with Werner’s syndrome were considered, the prevalence of heterozygotic carriers is expected to be higher than six per 1000. This figure predicts more than 23 540 mutations at both alleles are born each year.


AGEN Research Institute, 200 Kajiwara, Kamakura, Kanagawa 247-0063, Japan (Y Furuichi e-mail: furuichi@agene.co.jp), Department of Virology, Kanagawa Prefectural Public Health Laboratories, Yokohama, and Department of Rheumatology, Tokyo Metropolitan Otsuka Hospital, Tokyo

Iodine deficiency in France
Pierre Valeix, Majore Zarebska, Paul Preziosi, Pilar Galan, Bruno Pelletier, Serge Hercberg

Although theoretically easily preventable, iodine deficiency still prevails in many European countries because of inadequate programmes of iodine supplementation. The status of iodine nutrition was recently investigated in France on a sample of individuals from the Supplementation en Vitamines et Minéraux Antioxydants (SU.VI.MAX) cohort. The study consists of 12 735 adults (women aged 35–60 years and men aged 45–60 years). Data on baseline characteristics of the participants suggest that the present sample is, for the selected age group, close to the national population in terms of geographical density and socioeconomic status. The SU.VI.MAX study has been approved by the ethics committee of Paris-Cochin for studies with human beings. Estimates of the dietary supply of iodine are based on the measurements of the excretion of iodine in urine. Urinary iodine (UI) concentrations were measured with the Sandell-Kolthoff reaction in spot urine samples collected from fasting individuals. Cases of overt iodine contamination (UI≥60 μg/100 mL) were excluded, as were individuals treated with thyroid hormones. The final study group consisted of 4860 men and 7154 women.

According to WHO, an indication of an iodine-replete population consists of a median value for UI concentration greater than or equal to 10 μg/100 mL; no more than 20% of samples should be below 5 μg/100 mL. In our study, the median UI for the entire male population was 8·5 μg/100 mL, and 8·2 μg/100 mL for the female sample. The percentage of individuals with UI greater than or equal to 10 μg/100 mL was lowest among males of those ages. Urinary iodine concentrations were measured with the Sandell-Kolthoff reaction in spot urine samples collected from fasting individuals. Cases of overt iodine contamination (UI≥60 μg/100 mL) were excluded, as were individuals treated with thyroid hormones. The final study group consisted of 4860 men and 7154 women.

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In our study, the overall goitre prevalence ranged from 11.3% for the entire male population to 13.9% for the female sample, suggesting that the thyroid is most probably exposed through incidental additions of iodine to the environment, age with advice on dietary sources of iodine should be moderate in degree, might be the result of food-pattern radiation-induced damage to the thyroid in case of nuclear to a mild goitrogenic effect due to moderate iodine deficiency. Implemented. In addition, efforts to improve iodine nutrition energy intake, but could also be due to the public awareness impairment should be emphasised, and a nationwide effort to promote iodised salt and to provide women of child-bearing (10–14 years of age). 5 Surveillance of iodine nutrition in the Tchadian Ministry of Health. 20 severely malnourished children without oedema (weight-for-height <70% of average for three meals) The study took place in a therapeutic feeding centre, in Mao, Chad, run by Action Contre la Faim (Paris) and the Tchadian Ministry of Health. 20 severely malnourished children without oedema (weight-for-height <70% of

Regional patterns of median UI (µg/100 mL) in adults aged 45–60 years (male/female)

The age-related decrease in iodine intake, although moderate in degree, might be the result of food-pattern changes paralleling the observed physiological reduction in energy intake, but could also be due to the public awareness of the need for a voluntary reduction in added salt to control hypertension. Regional variations in median concentrations of UI are in part a reflection of fluctuations in the total iodine content of foodstuffs and pasture grasses, which depends on the quantities supplied to soil by the weathering of primary bedrocks, by the atmosphere in the form of rain or aerosols, through incidental additions of iodine to the environment, by agricultural practices (compound fertilisers, herbicides, iodine-supplemented feedstuffs), and food processing (iodine-sanitising agents on farms). Conclusions from recently published data on iodine nutrition in the USA should remind health officials in industrialised countries of the inconsistency of iodine intake, since the presence of iodine in the food chain may be driven largely by commercial rather than health interests. 4 Although iodised household salt was introduced on a voluntary basis from 1952 onwards (10–15 mg sodium iodide per kg salt) results of the SU.VI.MAX study definitively underlined the risk for the French adult population of being exposed to mild iodine deficiency. By contrast, a study pointed to a significant improvement of the hitherto prevailing borderline iodine deficiency among French school pupils (10–14 years of age). 5 Surveillance of iodine nutrition in pregnant women to prevent the occasional risk of intellectual impairment should be emphasised, and a nationwide effort to promote iodised salt and to provide women of child-bearing age with advice on dietary sources of iodine should be implemented. In addition, efforts to improve iodine nutrition through generalised iodine prophylaxis would reduce radiation-induced damage to the thyroid in case of nuclear accident.

In our study, the overall goitre prevalence ranged from 11.3% for the entire male population to 13.9% for the female sample, suggesting that the thyroid is most probably exposed to a mild goitrogenic effect due to moderate iodine deficiency. Forthcoming results concerning thyroid function tests, and results from goitre surveys and ultrasonographic scans will illustrate the interrelations between iodine nutrition and underlying thyroid dysfunctions.