

Establishing a radioimmunoassay service for the management of endemic goitre in Benin

The challenge...

Endemic goitre is an enlargement of the thyroid gland, often associated with a lack of iodine in the diet. There is a high incidence of goitre in the Collines and Donga Provinces of Benin. Goitre is also aggravated by the consumption of cassava (a root vegetable), which is a source of thiocyanates. More than 20% of children aged 6–12 and over 10% of the total population of Collines and Donga Provinces suffer from endemic goitre. The sickness can lead to a drop in intellectual capacity and even cretinism (neonatal hypothyroidism). To avoid goitre, a daily dose of 35–120 mg of iodine is recommended.

The project...

Under an IAEA technical cooperation project, the first radioimmunoassay (RIA) service in Benin has been set up. The centre uses *in vitro* nuclear medicine techniques for the detection and management of endemic goitre. With IAEA assistance, nuclear medicine services have been introduced and RIA services established.

Training has been delivered in the various RIA techniques, including good laboratory practices and quality assurance/quality control. Practical training was provided through fellowships and scientific visits for setting up and operating tumour marker services. Twenty social workers have been trained in epidemiology and the evolution of endemic goitre, and 12 doctors have received training on recent developments in the management of patients suffering endemic goitre.

The project also provided the equipment and consumables necessary for the successful implementation of the project.

The impact...

As well as establishing the first RIA service in Benin that uses *in vitro* nuclear medicine techniques for the detection and management of endemic goitre, the project has also supported the creation of linkages between five local health centres (Bantè, Bassila, Dassa, Djougou and Savalou). An RIA service has been set up in the Faculty of Health Sciences at Cotonou, and a reporting system and patient database have been developed.

In terms of sustainability, the RIA service is now financially autonomous as regards the management of reagents and the payment of staff (a biologist and a nurse). The number of examinations requested by physicians is increasing steadily.

