

# Hypothyroidism among UAE patients with Down syndrome

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## Background

Down Syndrome (DS) is a common chromosomal abnormality and is known to be associated with hypothyroidism. Optimal treatment is important and can have implications on cognition, psychological and physical wellbeing. No published data on hypothyroidism in DS in the UAE population is available.

## Aims

An audit of management of hypothyroidism amongst UAE residents with DS.

## Methods

All individuals with DS attending a large Diabetes Centre in the UAE were identified through a computerized ICLDC database. Individual records were explored to retrieve information on thyroid function and relevant parameters.

## Results

62 patients with DS were identified (38 adult aged between 16-44 years; 24 of paediatric age 4-15). 34 of these were of Emirati origin. Another 26 were expatriates (Oman, Syria, Portugal and Philippines). Mean BMI was  $33 \pm 8.8 \text{ kg/m}^2$  (M 36.1 and F 33.9). Mean height was  $1.47 \pm 0.094$ . 35 individuals had hypothyroidism; thyroid antibodies were available in 12 patients and were unequivocally positive in 10 subjects. 34 individuals were on thyroxine (one refused treatment). There was a linear correlation between thyroxine dose and weight ( $P = 0.01$ ,  $R^2 = 0.359$ ). Mean thyroxine dose was  $103.0 \pm 65 \text{ mcg/day}$  in adult age group and  $56.2 \text{ mcg/day}$  in paediatric age group. Mean TSH level was  $3.32 \pm 2.83 \text{ mU/l}$  for individuals on thyroxine.

## Conclusion

In the population of DS patients studied, hypothyroidism was highly prevalent. Management was mostly as per international guidelines. Wide variation in TSH and thyroxine dose is indicative of challenges in treating hypothyroidism in patients with DS.