



Call for more thyroid function tests for older patients to improve diagnosis rate

A new study of over 3500 patients with overactive thyroids shows that elderly patients experience fewer signs and symptoms of the condition. This study, which will be presented at the annual Society for Endocrinology BES meeting in Harrogate, is the largest study to date to show a difference in symptoms in patients with overactive thyroids according to age. The authors, Dr Kristien Boelaert and colleagues at the University of Birmingham, now call for clinicians to adopt a lower threshold for performing thyroid function tests in older adults.

The thyroid is an endocrine gland that produces hormones which control the body's metabolism. When the thyroid becomes overactive due to disease, it releases an excess of thyroid hormones into the bloodstream, a condition called hyperthyroidism. Hyperthyroidism is common, affecting up to 2% of the UK population and is most prevalent in young and middle-aged women. It causes the body's metabolism to speed up, leading to a variety of symptoms including weight loss and tiredness.

Hyperthyroidism often goes undiagnosed, especially in elderly patients, despite the presence of clinical symptoms. To investigate further, Dr Kristien Boelaert and colleagues looked at the influence of age on the clinical symptoms of 3563 UK patients with hyperthyroidism. They divided these patients into four groups according to their age: 16-32 years (n=877); 33-44 years (n=878); 45-60 years (n=926); 61-91 years (n=882).

They found classic symptoms of hyperthyroidism such as palpitations, tremor, anxiety, heat intolerance, diarrhoea and neck swelling were less common in older patients. Patients in the older age group were more likely to present with no symptoms (13%; 12%; 11%; 17% in respective groups, $p < 0.001$) and least likely to experience five or more symptoms (29%; 33%; 32%, 13%, $p < 0.001$). This could explain why hyperthyroidism often goes undiagnosed in this older age group. The authors are now calling on clinicians to offer thyroid function tests more readily to older adults, to improve the diagnosis rate of hyperthyroidism in this age group.

Researcher Dr Kristien Boelaert said:

"Hyperthyroidism affects up to 2% of the population but often goes undiagnosed, especially in the elderly. In this study, we assessed the clinical symptoms of patients with hyperthyroidism in different age groups. Our findings show that classic symptoms of hyperthyroidism are less common in older patients who have different clinical profiles. We show that older adults with

raised thyroid hormone levels are likely to experience fewer symptoms, making hyperthyroidism more difficult to detect. This helps to explain why hyperthyroidism often goes undiagnosed in elderly patients. We now call on clinicians to lower the threshold for performing thyroid function tests in older adults, in order to improve the diagnosis rate of hyperthyroidism in this age group.”

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Notes for editors

The paper will be presented at the Society for Endocrinology BES meeting at 17:00 on Tuesday 17 March 2009. The abstract for this work is reproduced below: see <http://www.endocrine-abstracts.org/ea/0019/ea0019oc37.htm>

The Society for Endocrinology BES 2009 is Britain's biggest scientific meeting on hormones, and is taking place at the Harrogate International Centre, Harrogate, from 16-19 March 2009. For the full programme, please see <http://www.endocrinology.org/meetings/2009/sfebes2009/prog/prog.aspx>

Please mention the Society for Endocrinology BES meeting in any story

The Society for Endocrinology is Britain's national organisation promoting endocrinology and hormone awareness. For general information, please visit our website: <http://www.endocrinology.org>

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Patient Support Group

The British Thyroid Foundation is a patient-led charitable organisation dedicated to raising awareness and helping people with thyroid disorders. For further information, please contact the British Thyroid Foundation on Tel: +44 (0)1423 709 707, website: www.btf-thyroid.org.

ABSTRACT

Elderly patients presenting with hyperthyroidism have a paucity of symptoms and signs – a cross-sectional study of 3563 UK patients

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Hyperthyroidism is common affecting up to 2% of the UK population and the prevalence is highest in young and middle-aged women. Although patients may have clinical symptoms suggestive of hyperthyroidism, rates of undiagnosed hyperthyroidism range from 0.5-1.5%, especially in the elderly. We investigated 3563 UK patients to (i) assess the influence of ageing on clinical signs and symptoms

and (ii) identify symptoms and signs indicating hyperthyroidism in different age groups. Patients were divided into quartiles according to age at presentation (877 aged 16-32y, 878 aged 33-44y, 926 aged 45-60y and 882 aged 61-91y). There was a higher prevalence of males in the older age group compared with younger patients (18%;19%; 22%; 26% in the respective age groups, $p<0.001$) and toxic nodular disease was more common in older patients (3%; 5%; 15%; 30%, $p<0.001$). Younger patients had more severe thyrotoxicosis (median fT4 concentrations 51.7; 43.2; 37.8; 32.4pmol/l, $p<0.001$). Weight loss was the most commonly reported symptom and was most prevalent in those aged 45-60y (55%; 57%; 62%; 57%, $p=0.01$). Symptoms of palpitations (49%; 55%; 53%; 36%, $p<0.001$), tremor (53%; 56%; 55%; 37%, $p<0.001$), anxiety (38%; 43%; 46%; 26%, $p<0.001$), heat intolerance (53%; 55%; 57%; 37%, $p<0.001$), diarrhoea (21%; 25%; 24%; 13%, $p<0.001$), neck swelling (30%; 24%; 15%; 13%, $p<0.001$) and gritty eyes (7%; 7%; 7%; 3%, $p<0.001$) were less common in older patients. The highest number of asymptomatic patients was found in those aged over 61 (13%; 12%; 11%; 17%, $p<0.001$) and conversely the lowest number of patients reporting 5 or more symptoms was found in the elderly (29%; 33%; 32%, 13%, $p<0.001$). Clinical signs of tremor (44%; 37%; 37%; 37%; $p=0.004$) and goitre (83%; 80%; 64%; 47%; $p<0.001$) were most prevalent in younger patients and the finding of atrial fibrillation was most common in the elderly (0%; 1%; 3%; 14%; $p<0.001$). Signs of ophthalmopathy including lid retraction, proptosis and ophthalmoplegia, in those with Graves' disease, were similarly frequent across all age groups.

Conclusions: We have confirmed that the clinical profile of hyperthyroidism is different in older patients who present with significantly fewer symptoms and signs. We propose that clinicians should adopt a low threshold for performing thyroid function tests in older adults.