

## Editorial

Most clinicians are familiar with acanthosis nigricans, a dermatosis, characterised by brownish-black velvety, papillomatous hyperkeratotic plaques, usually occurring in the neck, axillae and other intertriginous surfaces.<sup>1</sup> Acanthosis nigricans is most frequently associated with insulin-resistant states, such as type 2 diabetes, polycystic ovarian disease and a variety of endocrine disorders.<sup>2</sup> Less commonly, acanthosis nigricans is also associated with internal malignancies, such as carcinoma of the colon,<sup>3</sup> and in the setting of niacin use, in the management of dyslipidaemia.<sup>4</sup> Acanthosis nigricans is detectable in more than 50% of children with type 2 diabetes mellitus, and is recognised more frequently in darker-skinned obese individuals.<sup>5</sup> In this issue of *JEMDSA*, Venkatswami<sup>6</sup> reports that the severity of acanthosis nigricans correlated with the degree of insulin resistance in a large group of Indian patients attending a dermatology clinic, and also with the texture of the lesions. Lesions that were rough to the touch or visibly coarse also correlated with the degree of insulin resistance, determined with homeostasis model assessment. Thus, acanthosis nigricans may be a useful sign when attempting to detect individuals at high risk of developing type 2 diabetes. It may be worthwhile investigating this finding in the South African context, especially in overweight and obese children and adolescents.

Hypothyroidism in adults is associated with a decrease in red blood cell mass, usually manifesting as normochromic normocytic anaemia.<sup>7</sup> Diminished oxygen requirements in hypothyroidism (and a resulting decrease in erythropoietin production)<sup>7</sup> is the putative mechanism responsible for this finding. Less commonly, the anaemia may be macrocytic (due to associated vitamin B<sub>12</sub> deficiency or folate deficiency as a result of malabsorption or decreased intake), or microcytic (due to menorrhagia or decreased iron absorption as a result of achlorhydria in women of childbearing age).<sup>7</sup> This traditional view was recently challenged by Kawa et al, who demonstrated that thyroid hormones directly modulate cell production in the bone marrow.<sup>8</sup> Hypothyroidism and hyperthyroidism modifies thyroid receptor gene expression in haematopoietic progenitor cells in vivo. These authors also found that thyroid hormones strongly influenced the apoptotic process in haematopoietic progenitor cells by affecting the expression of pro- and anti-apoptotic genes. In this edition of *JEMDSA*, Onyiriuka et al<sup>9</sup> describe severe persistent normochromic normocytic anaemia in a six-month-old Nigerian infant, eventually diagnosed with congenital hypothyroidism. The white cell and platelet count was not affected and the anaemia resolved with L-thyroxin replacement therapy. This case study demonstrates that anaemia may also be a clinical manifestation of hypothyroidism in paediatric patients. The finding of an umbilical hernia in an infant, as in this case, should alert the clinician to the need to investigate for hypothyroidism, and in so doing, prevent irreversible mental retardation.<sup>10,11</sup>

In an important report, the World Health Organization (WHO) defines adherence (in the context of diabetes treatment) as the active and voluntary involvement of the patient in the management of his or her disease by following a mutually agreed course of treatment, and shared responsibility between the patient and healthcare providers.<sup>12</sup> Adherence (to self-care) is a complex phenomenon consisting of multiple domains, and is influenced by many factors, including socio-economic, healthcare systems, disease-specific, therapy-related and patient-related factors. According to the WHO report,<sup>12</sup> poor adherence to treatment is prevalent in patients with diabetes, regardless of where the data were collected. Data from developing countries on prevalence and determinants of adherence are particularly scarce. Therefore, the qualitative study by Ebrahim, De Villiers and Tasneem,<sup>13</sup> which reports on adherence to the dietary guidelines in the management of diabetes in this edition of *JEMDSA*, is of considerable importance and is welcomed.

**Willie Mollentze**

Editor-in-Chief: *JEMDSA*

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