

Letter to the Editor

Scintigraphy in hypothyroid neonates

Sir,

I read with interest the article by Tindall, Griffiths & Penn.¹ They conclude that 'scintigraphy has been shown to be of little practical value in... patients with hypothyroidism and therefore should not be requested'. This does not hold true for neonates who are identified by newborn screening to have congenital hypothyroidism, i.e. thyrotrophin above 7 mU/l and T4 below 6 µg/dl, as defined by the New England Congenital Hypothyroidism Collaborative² and the German Hypothyroidism Screening Collaborative.³

We performed radio-iodine-123 scintigraphy in 24 of these infants. We found 8 to have athyrosis, 7 to have lingual ectopia, 1 to have a struma and 8 to have a eutopic normal thyroid.

These results were relevant for consulting the families. In athyrosis it is imperative to perform a meticulously exact daily application of thyroxine throughout life. In lingual ectopia life-long therapy is necessary too, but the child should not be harmed when a dose is omitted, because there should be enough residual capacity for some thyroxine production. In struma further investigations are indicated to rule out whether the aetiology is dys-hormonogenesis (with the consequence of lifelong therapy) or iodine deficiency with the consequence of only a few

days of treatment.⁴ A normal thyroid in the scintigraphy suggests a transient form of hypothyroidism with the consequence of a treatment withdrawal trial after the first year of life.⁵

If we had performed sonography instead of scintigraphy, we would have got less information, at the least we would not have been able to distinguish the first two groups.⁶ Our actual procedure is to perform firstly sonography; if this does not show orthotopic thyroid tissue, as in 15/24 of our above reported cases, then lingual ectopia or athyrosis is suspected and only in such patients do we perform scintigraphy as a second investigation.

We suggest adding a sixth indication for thyroid scintigraphy to Table II of Tindall, Griffiths & Penn: 'suspected athyrosis' or 'infants with congenital hypothyroidism without orthotopic tissue'.

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References

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