

Letter to Editor

Contribution of Thyroid Scintigraphy and SPECT/CT Imaging in the Diagnosis of Double Ectopic Thyroid: About a Case

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Abstract

Thyroid ectopia is a rare condition associated with a failure of thyroid gland migration during embryonic development. It may be asymptomatic or manifest as clinical or biological hypothyroidism. We report here the case of a girl whose diagnosis of double ectopic thyroid was confirmed by the SPECT/CT hybrid scanning imaging. Firstly the cervical ultrasound did not indicate thyroid tissue in the thyroid lodge. Cervical CT concluded that there was no thyroid in the normal position with doubt about the presence of thyroid tissue at the upper cervical level in the left peri-laryngeal region. Thyroid scintigraphy showed an ectopic thyroid tissue in a high cervical position, with a fairly intense uptake but without the possibility of localization. Complement with SPECT/CT was performed and allowed the localization of ectopic thyroid tissue in basilingual and left peri-laryngeal. This case testifies the superiority of functional imaging, in particular in hybrid mode, in the exploration of thyroid ectopia.

Keywords: Thyroid ectopia; Ultrasound; CT scan; Thyroid scintigraphy; SPECT/CT

Introduction

Thyroid ectopy is a rare condition associated with a failure of thyroid gland migration during embryonic development. It may be asymptomatic or manifest as clinical or biological hypothyroidism. We report here the case of a girl whose diagnosis of double ectopic thyroid was confirmed by the SPECT/CT hybrid scanning imaging [1-3].

Patients and Methods

This is a girl of 9 years and 6 months, with no notable family history, who has a staturponderal delay. The clinical examination found a girl in good condition, a weight of 15 kg (-3SD) and a height of 114 cm (-3SD). At the cervical examination, the thyroid gland was discreetly palpable at the left cervical region but the thyroid lodge was free. The hormonal assessment revealed hypothyroidism with an usTSH level of 22.6 μ IU/ml. Cervical ultrasound did not indicate thyroid tissue in the thyroid lodge. Cervical CT concluded that there was no thyroid in the normal position with doubt about the presence of thyroid tissue at the upper cervical level in the left peri-laryngeal region. We prescribed a thyroid scintigraphy for a functional imaging. It is therefore sought ectopic thyroid by thyroid scintigraphy after injection in I.V of a dose of 16 MBq (0.34 mCi) of Technetium 99 m (Figure 1) [4,5].

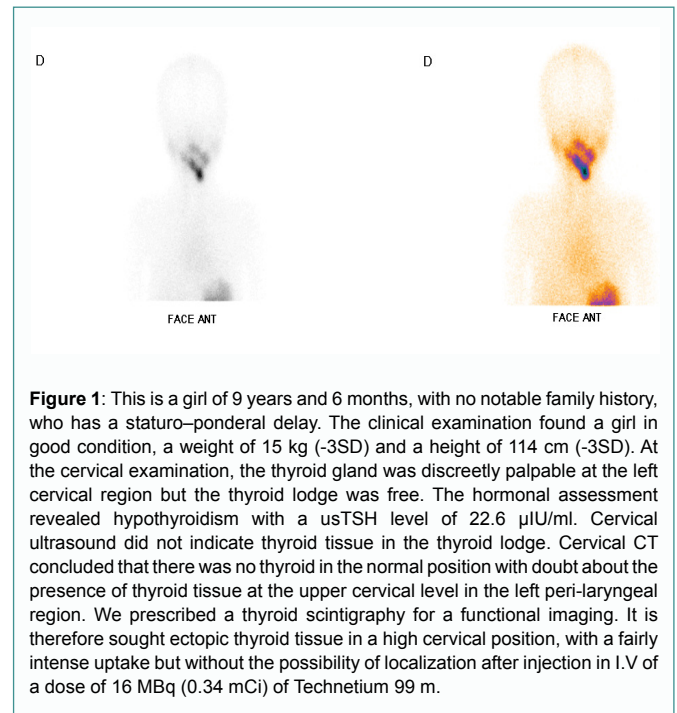


Figure 1: This is a girl of 9 years and 6 months, with no notable family history, who has a staturponderal delay. The clinical examination found a girl in good condition, a weight of 15 kg (-3SD) and a height of 114 cm (-3SD). At the cervical examination, the thyroid gland was discreetly palpable at the left cervical region but the thyroid lodge was free. The hormonal assessment revealed hypothyroidism with a usTSH level of 22.6 μ IU/ml. Cervical ultrasound did not indicate thyroid tissue in the thyroid lodge. Cervical CT concluded that there was no thyroid in the normal position with doubt about the presence of thyroid tissue at the upper cervical level in the left peri-laryngeal region. We prescribed a thyroid scintigraphy for a functional imaging. It is therefore sought ectopic thyroid tissue in a high cervical position, with a fairly intense uptake but without the possibility of localization after injection in I.V of a dose of 16 MBq (0.34 mCi) of Technetium 99 m.

Results

Thyroid scintigraphy showed an ectopic thyroid tissue in a high cervical position, with a fairly intense uptake but without the possibility of localization. Complement with SPECT/CT was performed and allowed the localization of ectopic thyroid tissue in basilingual and left peri-laryngeal (Figures 2 and 3).

Conclusion

Thyroid ectopia is a rare congenital malformation whose location can be multiple. In our case, thyroid scintigraphy revealed two ectopic thyroid foci not visualized on cervical ultrasound and one of which

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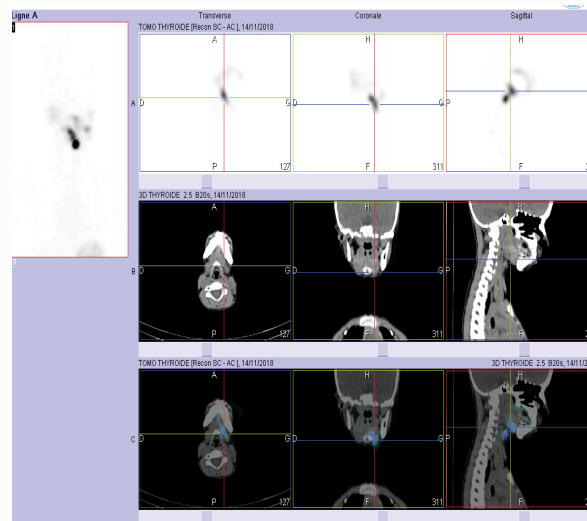


Figure 2: The tomoscintigraphic images highlighted a moderate hyperfixation of the cervical region whose complement by SPECT/CT has objectified an ectopic basilingual thyroid tissue lateralized on the left.

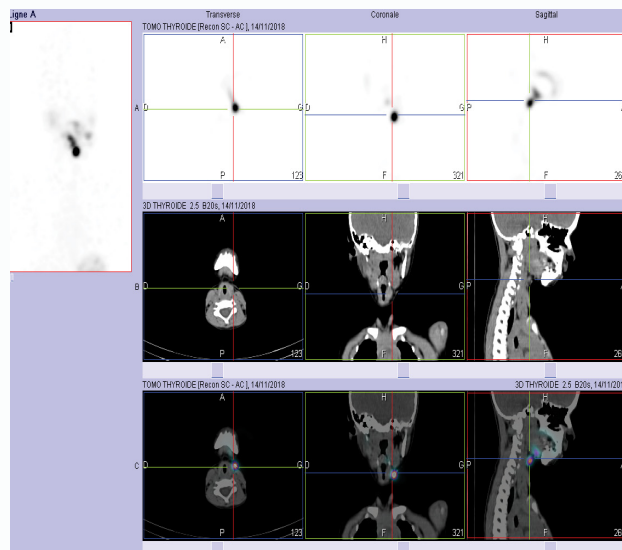


Figure 3: On the tomoscintigraphic images, a second focus of intense fixation was highlighted in relation to the cervical region, the complement of which by SPECT/CT allowed to confirm a second ectopic thyroid tissue in the left peri-laryngeal position.

could not be visualized on CT scan, thus testifying to the superiority of functional imaging, in particular in hybrid mode, in the exploration of thyroid ectopias.

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