EDITORIAL

PHILOLOGIC REFLEXIONS ABOUT IMMUNORADIOMETRIC TSH AND TRH TEST DURING OPTIMAL THYROID HORMONAL THERAPY INFANTILO-JUVENILE DIABETES AND HYPERTENSION ASSOCIATED WITH DIABETES MELLITUS IN DAKAR

Sidibe El H*
Département des sciences médicales, université Paris-VII, France

Editorial

In infants, the importance of management is justified by knowledge of factors and characteristics of infantilo-juvénile diabetes epidemiology. It is interesting to describe socio-demography of infantilo-juvénile diabetes and insulin dosages profiles. In Senegal, a retrospective study have concerned 79 cases. Since the introduction of third generation of the TSH assay methods, TRH test remains only essential for limited domains. But for some authors, application of immunoradiometric assays combined with TRH test have not sufficiently evaluated as remarked by some authors. Thyreotroph cell has a potent desiodase and active in normal subject explaining the strong correlation between T4 and TSH. Interindividual variability of the activity of desiodase enzyme is very possible because of genetic polymorphism. We have studied prospectively and determined in and homogenous patients population with treated primary hypothyroidism, a real over dosage by an abolished first generation immunoradiometric TSH to TRH and given optimal dosage of levothyroxine during substitutive thyroid hormono-therapy. Type 2 diabetes mellitus in a frequent condition with high mortality which management as so far may be both individualized and integrated and not only focused on glycemic control but concern also the other vascular risk factors frequently associated (mainly arterial hypertension). Sympathetic modulation role evocated in rat models of non insulin-dependent mellitus with arterial hypertension induced by sodium chloride shows the potential benefit of alpha and beta adreno-blockers. Arterial hypertension frequency and data about lead to interest in evaluation of treatment and brief literature review with Centre Marc Sankalé Dakar University Hospital setting of study.

In infants, the importance of management is justified by knowledge of factors and characteristics of infantilo-juvénile diabetes epidemiology. It
is interesting to describe socio-demography of infantilو-juvénile diabetes and insulin dosages profiles. In Senegal, retrospective studies have concerned 79 cases. A comparative study between subject less 18 years aged (44 cases) compared to those of more than 19 years and treated by insulin and in all cases age less than 40 years (35 cases) [1].

An analytic study shows mean age of 18.34 ± 7.45 years for the whole population studied with respectively 18.075 ± 8.24 years for girls and 18.58 ± 6.49 years in boys. Geographical origin shown a grow thing graduation for mean age going from 17.56 ± 5.03 years in subjects of urban origin through 18.03 ± 6.49 years in sub-urbs to 20.45 ± 8.32 years in rural. The mean survey duration was 4.79 ± 4.98 years for the all population studied. Concerning sex, it was respectively 4.71 ± 5.54 years in boys and 4.97 ± 4.37 years in girls. A graduation exists in this survey duration that was 4.50 ± 5.25 years in sub-urbs to attain 2.81 ± 2.51 in rural. Mean regular insulin dosages used early and finally during the survey related to the body weight were for all the population studied 0.75 ± 0.28 international units kg per weight. Mean dosage was 0.73 ± 0.26 in boys and 0.77 ± 0.30 in girls. Concerning geographical origin, a graduation exists in rural that had received 0.64 ± 0.22 IU per kg of weight through 0.69 ± 0.23 IU/kg reaching to 0.79 ± 0.29 international units per kg of weight [2].

Concerning age group of less or equal 18 years old or more than 18 years old, a significative difference exists in mean age (13.11 ± 4.03 ; 24.77 ± 5.47), in survey mean duration (5.65 ± 5.70; 3.71 ± 3.59) and in mean dosages insulin international units per kg body weight (0.91 ± 0.24 ; 0.56 ± 0.22). The importance of puberty in juvenile diabetes resides in the fact that final eight depends on glycemia and microvascular complications. If advanced final glycation end products can be implicated justifying preventive therapeutics to create but enteroviruses role constitutes another preventive axis [3].

Since the introduction of third generation of the TSH assay methods, TRH test remains only essential for limited domains. But for some authors, application of immunoradiometric assays combined with TRH test have not sufficiently evaluated as remarked by some authors. Thyreotroph cell has a potent desiodase and active in normal subject explaining the strong correlation between T4 and TSH. Interindividual variability of the activity of desiodase enzyme is very possible because of genetic polymorphism. We have studied prospectively and determined in and homogenous patients population with treated primary hypothyroidism, a real overdosage by an abolished first generation immunoradiometric TSH to TRH and given optimal dosage of levothyroxine during substitutive thyroid hormono-therapy [4].

Our criteria’s for TSH response to TRH had for lower limit a delta TSH of 4 Ui/ml, this is higher than lower level of 1 Ui/ml proposed by some authors. TRH tests as other dynamic assays of anterior pituitary are useful to amplify subtle abnormalities. A defect in response to hypothalamic hormone can be caused by absence or dysfunction of pituitary cells or elevated negative feedback by peripheral hormones. An example of this situation is lost of response of TSH to TRH in thyrotoxicosis. Finally, in incipiens primary hypothyroidisme or thyrototoxicosis TRH test remains particularly indicated even in presence of immunoradiometric TSH assay [5].

Body weight/kg dosage in our patients is between those proposed (1.72 ± 036 microg/kg/d) and (2.08 ± 0.58 microg/kg/d) ; the 2 series had a equivalent mean age with ours. But patients older have received identical body weight dosage (1.86 ± 0.08 microg/kg/d) in patients 60 years older; other authors haved proposed a lower dosage (1.60 microg/kg/j) for a mean age of 68 years.

The body surface/m² dosage allowing an euthyroidyis 67.3 ± 14.1 microg/m²/d in a serie while that its raises to 72.75 ± 7.5 micro g/m² in our serie ; the mean age being respectively 54 ± 11 et 58 ± 15 ans. In our patients treated with levothyroxine, we have observed a daily/m² dosage more correlated with delta TSH. This result is in conformation with those of other authors. We have remarked that this discrimination is less important in the group treated by levothyroxine and triiodothyronine [6].

We have not observed modification in cholesterolemia during comparison of patients with delta TSH less than 4micro Ul/ml with those with more than 4micro Ul/ml. No evident relation was observed when delta TSH was lower than 4micro Ul/ml. This fact signifies that modifications leading to decrease delta TSH do not disturb cholesterolemia.

Even if immune enzymatic technical essay of first generation was use in our study, our results are important. Because the population studied of 52 patients with 92 TRH tests under levothyroxine and association levothyroxine and triiodothyronine has allowed to evaluate an optimal hormonal control [4].
Type 2 diabetes mellitus is a frequent condition with high mortality which management as so far may be both individualized and integrated and not only focused on glycemic control but concern also the other vascular risk factors frequently associated (mainly arterial hypertension). Sympathetic modulation role evocated in rat models of non insulin-dependent mellitus with arterial hypertension induced by sodium chloride shows the potential benefit of alpha and beta adreno-blockers. Arterial hypertension frequency and data about lead to interest in evaluation of treatment and brief literature review with Centre Marc Sankalé Dakar University Hospital setting of study [7].

65 women and 15 men have been including. So 41.25% of the patients had age between 50 and 60 years. Concerning work, 67.5% of the patients were women at home. About origin milieu, 43 patients originate from urban areas (53.75%), 32 from sub-urban areas (40%) and 5 from rural areas (6.25%). 66.25% of the patients had post-prandial glycemia between 1 and 2.19 g/l. Mean arterial pressure profile shows that diastolic was between 7 and 9.45 cm Hg in 35% of patients and that 38.75% had a systolic between 12 and 16.17 cm Hg under treatment. Mean body mass index show that 19 patients from 32 had an index between 0.31 and 0.39. The diabetic type was in 45 cases plethoric form, in 15 cases metplethoric and in 10 cases non metaplethoric non obese. Drug treatment was metforminesylfonylurea (glibenclamide, tolbutamide, chlorpropamide). Antihypertensive drugs were diuretics (furosemide, chlorothiazide, aldactone, triamterène, indapamide), calcium channel inhibitors (nifédépine, isradipine) and converting enzyme inhibitors (énalapril, captopril) and central antihypertensive drugs (alphaméthyldopa, guanfacine, clonidine).

Insulin-resistance and antihypertensive treatment interact. Differences in coronary atheroma risk exist in non insulin-dependent diabetics depending of their ethny. Macroangiopathy remains frequent in case of severe arterial hypertension comparatively to controls. But it is important to be aware of neuropathic status in diabetics because dysautonomy have to be managed. Losartan treatment decreases Transforming Growth Factor beta 1 serum level value and urinary albumin excretion and type 2 diabetes with elevated basal TGF bêta 1 suggesting that this factor could be a marker in patients that could particularly benefit of angiotensinreninysesysteme blockers.

Benefit impact of menopause hormonal substitutive treatment of arterial hypertension look like to be tolerated in normal controls and could be evaluated in post menopaused diabetic. In case of conversion enzyme inhibitors unsuccess it is suggested to prescribe calcium channel inhibitors. Now days, between antihypertensive drugs converting enzyme inhibitors (and perhaps angiotensine receptors blockers) look like to be more and more preferred specially in hypertensive diabetics with microalbuminuria or frank proteinuria [8].

References

4. Sidibe EH. L’iode oral régule la flore micro biotique prévenant les micro RNs.