Turner Syndrome and Autoimmune Thyroid Disease: peculiarities of evolution in 93 Turner Syndrome patients

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Introduction : Turner Syndrome (TS) is a relatively common chromosomopathy and according to epidemiological studies the prevalence of Autoimmune thyroiditis (AIT) in TS fluctuates from 10% to 21% versus 1.3% in the general population.

Objective: - to retrospectively evaluate thyroid autoimmune disorders and thyroid function in a group of 93 TS patients
- to compare the prevalence of AIT and thyroid dysfunction in subgroups of TS according to karyothype

Method: 93 girls diagnosed with TS in the Pediatric Endocrinology Department of the C. I. Parhon National Institute of Endocrinology were evaluated every 6 months: TSH, FT4 and ATPO, ATGL where measured. The follow-up period: 6 months - 6 years

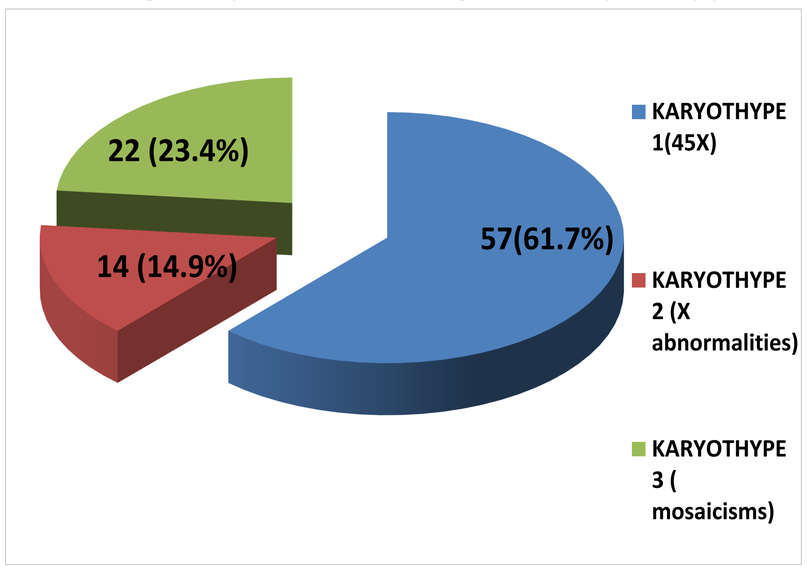
Patterns of thyroid function where classified according to TSH and FT4 values into:

1. euthyroidism: TSH, FT4 into the normal limits; 2. subclinical hypothyroidism (SH): normal FT4 and high TSH;
3. frank hypothyroidism: high TSH together with low FT4

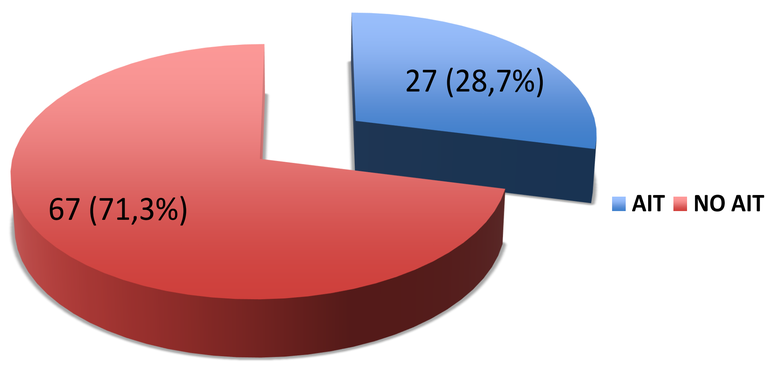
TS patients were divided in 3 groups according to karyothype: karyothype 1: 45X; karyothype 2: X abnormalities; karyothype 3: mosaicisms

Results:

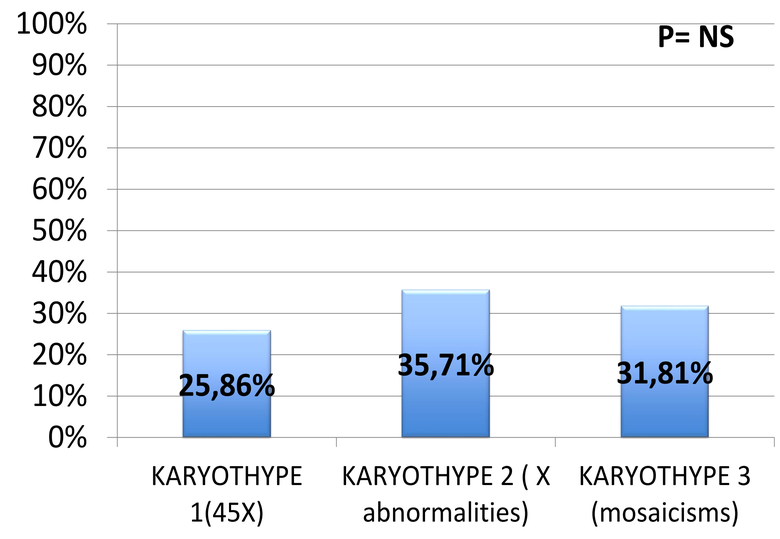
TS subgroups according to karyothype



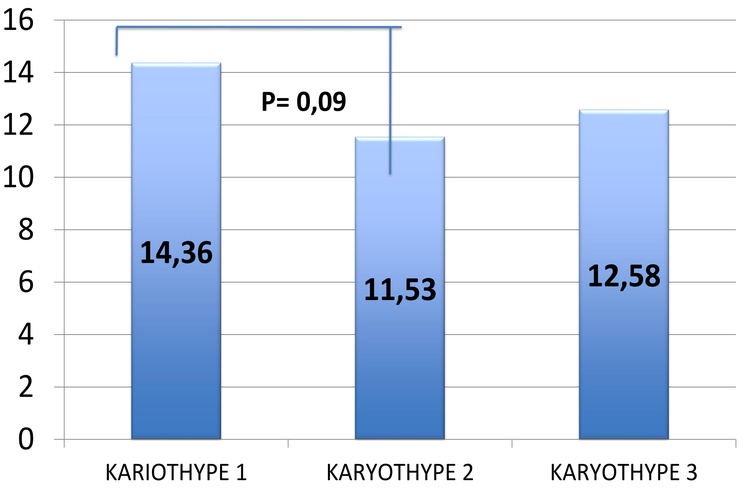
AIT prevalence in TS



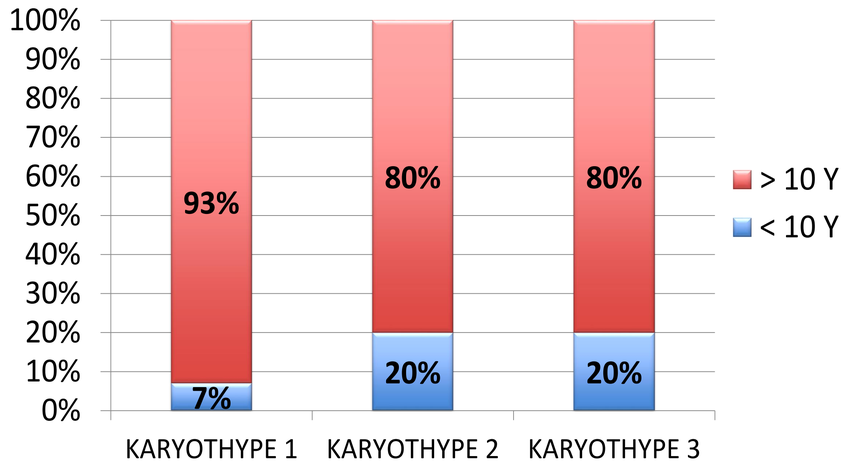
AIT in TS subgroups according to karyothype



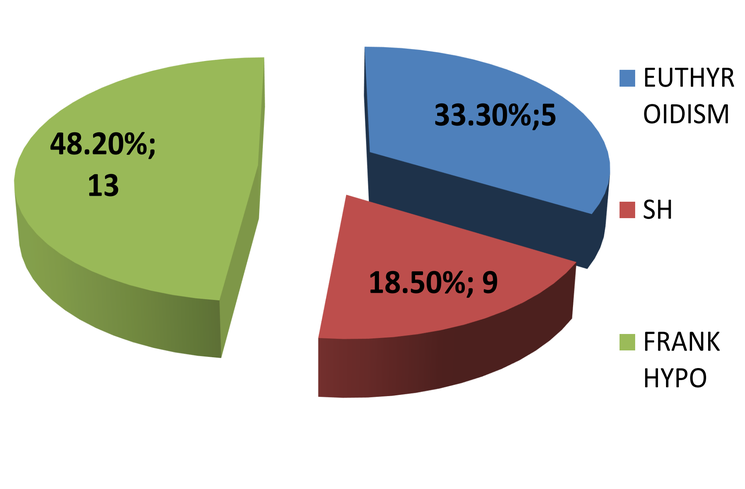
Median age at AIT diagnosis according to karyotł



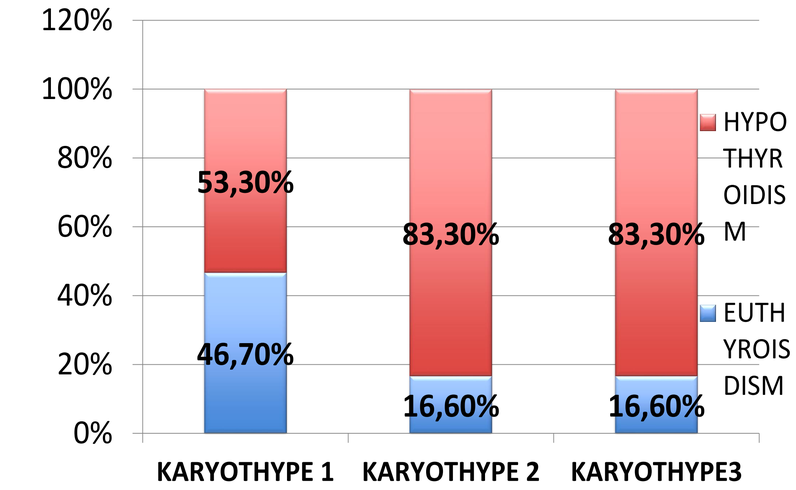
Age at AIT diagnosis in TS subgroups



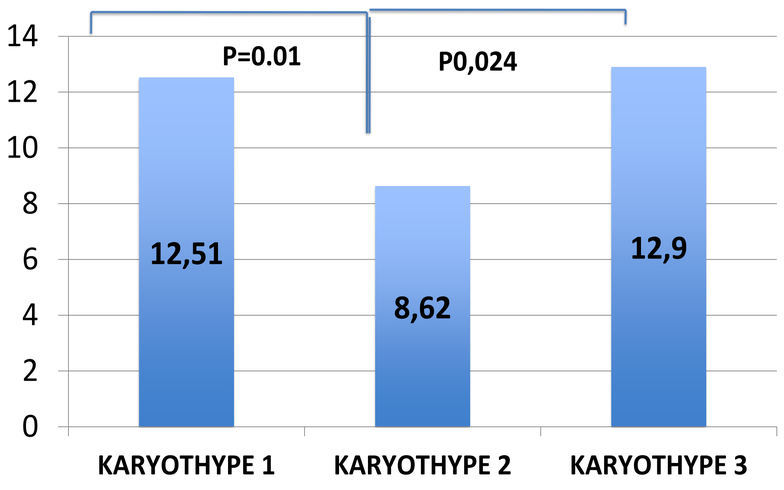
Thyroid function in TS patients with AIT



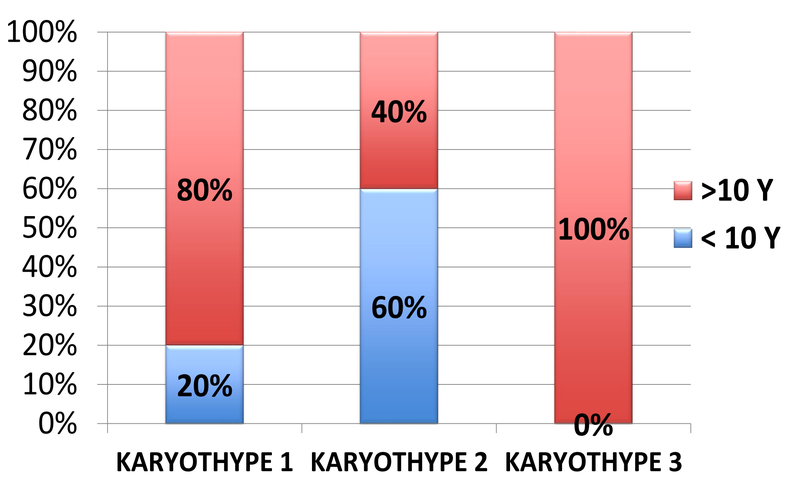
Thyroid function in AIT TS according to karyoth



Median age at hypothyroidism diagnosis in AIT T



Age at hypothyroidism diagnosis in AIT TS subgr



- Association with other AI diseases in TS patients

AI DISEASE ASSOCIATED	NR	AIT PRESENT IN TS PATIENT
CELIAC DISEASE	3 (KARIOTHYPE 1,2,3)	2

FAMILLY HISTORY OF AID	NR	AIT PRESENT IN TS PATIENT
DIBETES MELITUS	2 (KARYOTHYPE 1)	NO
HYPERTHYROIDISM	1 (KARYOTHYPE 1)	YES
AIT	1 (KARYOTHYPE 1)	NO

Conclusions: We confirm the increased prevalence of AIT (28,7%) and hypothyroidism (67%) in our 93 patients with TS. In our TS group the prevalence on AIT was higher in X abnormalities karyothype and was lower in 45X karyothype compared to other karyothypes. In our TS group with AIT median age at hypothyroidism diagnosis was significantly lower (p=0,01) in X chromosome abnormalities compared with other karyothypes. The **younger TAI hypothyroid** patient was 5,9 years and belonged to karyothype 2 subgroup

Our results support the importance of close monitoring of TS patients for autoimmune thyroid diseases and thyroid dysfunction.

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Growth and syndromes (to include Turner syndrome)

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