

# Audit of Metabolic Profiles in Women with Turner Syndrome (TS)



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## OBJECTIVES

Adults with TS are at increased risk of cardiovascular morbidity and mortality.

The aim of this study was to evaluate the compliance with clinical guidelines in measuring metabolic profiles in adults with TS.

## METHODS

Case notes of patients attending a dedicated TS clinic were studied.

Variables assessed included anthropometric measurements, blood pressure (BP), fasting plasma glucose (FPG), haemoglobin A1c (HbA<sub>1c</sub>), fasting lipid profile and thyroid function.

## RESULTS

- Of 40 women with TS, mean age 35.9 years (18-56 years), karyotyping was available on 70%
- 17.5% had monosomy (45,X); 52.5% had other X chromosome abnormalities (mosaic 45,X/46,XX, ring X chromosome, isochromosome Xq, deletions Xp and other structural abnormality of Y chromosome).
- Anthropometric and BP measurements were performed in all patients.
- FPG, HbA<sub>1c</sub>, fasting lipid profile and thyroid function were measured in 90%, 82%, 92.5% and 100% of women, respectively.
- 27.5% were on antihypertensive medications. 17.5% were on cholesterol-lowering medications.
- 40% had primary hypothyroidism on L- thyroxine replacement.

Figures showing distributions of BMI, glucose tolerance, LDL-cholesterol and Triglycerides in women with TS

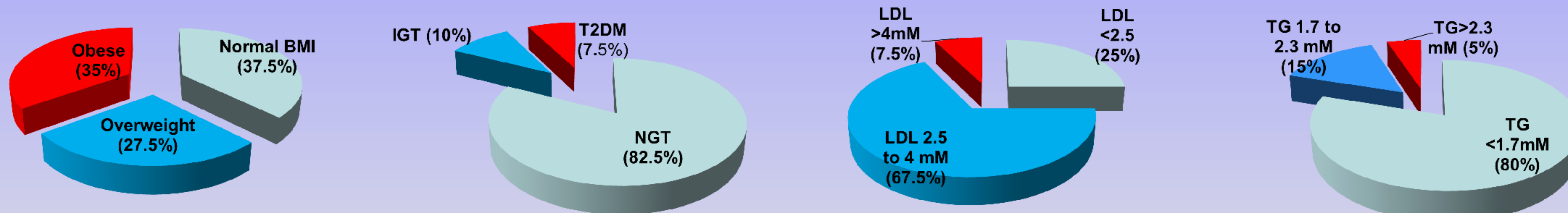


Table showing metabolic profiles of women with monosomy group and those with other X chromosome abnormalities

	Women with Monosomy (mean ± SD)	Women with other X chromosome abnormalities (mean ± SD)	P Value
n	7	21	
Age (years)	40 ± 7.1	31.2 ± 10.5	0.05
BMI (kg/m <sup>2</sup> )	27.4 ± 6.1	26.3 ± 5.2	0.65
SBP (mmHg)	127.7 ± 7.2	117 ± 11.9	0.034*
DBP (mmHg)	77.1 ± 4.6	72.8 ± 10.2	0.29
HbA <sub>1c</sub> (mmol/mol)	33.7 ± 3.9	32.7 ± 2.8	0.52
Total Chol (mmol/L)	5.3 ± 0.6	5.3 ± 1.1	0.92
LDL-Chol (mmol/L)	2.9 ± 0.5	2.8 ± 0.7	0.69
HDL-Chol (mmol/L)	1.8 ± 0.3	1.8 ± 0.5	0.84
Triglycerides (mmol/L)	1.2 ± 0.7	1.4 ± 0.8	0.64

\*P < 0.05 considered significant

## CONCLUSIONS

Service evaluation reveals good performance in measuring metabolic parameters in women with TS.

Overweight/obesity, hypertension and dyslipidaemia are common in our group of patients.

Ongoing efforts are aimed at improving these cardiovascular risk factors.

## Reference

Care of girls and women with Turner syndrome: a guideline of the Turner Syndrome Study Group, Bondy et al, J Clin Endocrinol Metab. 2007;92(1):10-25.

