Renal anomalies in children with Turner Syndrome: experience from a single-centre

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Authors have nothing to disclose

Background

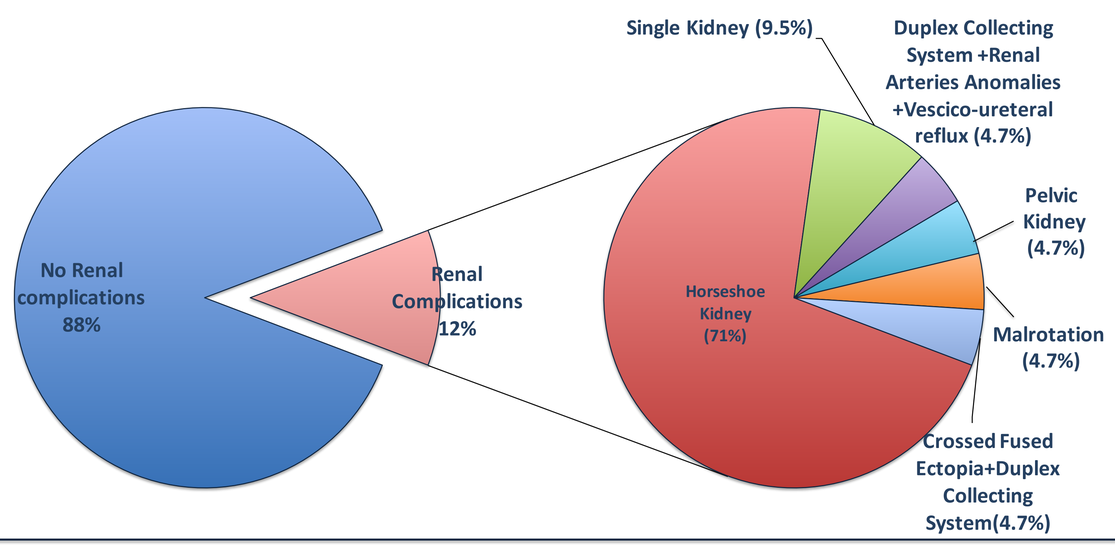
Turner syndrome (TS) affects ~1/2500 live female births. Renal abnormalities are estimated to be present in 30-40% of TS. Monosomic patients have been reported to have a higher risk of urological anomalies.

Aim and Methods

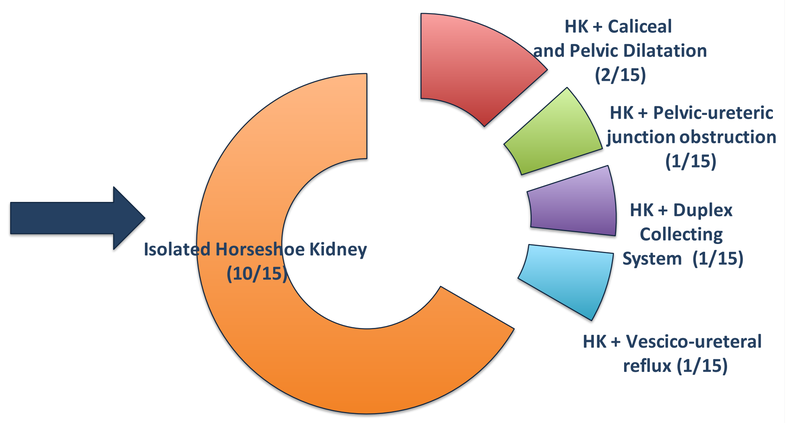
- To assess the frequency of renal malformations in TS
- To report complications of renal malformations in TS at most recent follow up
- The medical records of 182 patients with TS, born between 1970 and 2013 and attending the Royal Hospital for Children in Glasgow were retrospectively reviewed

Results

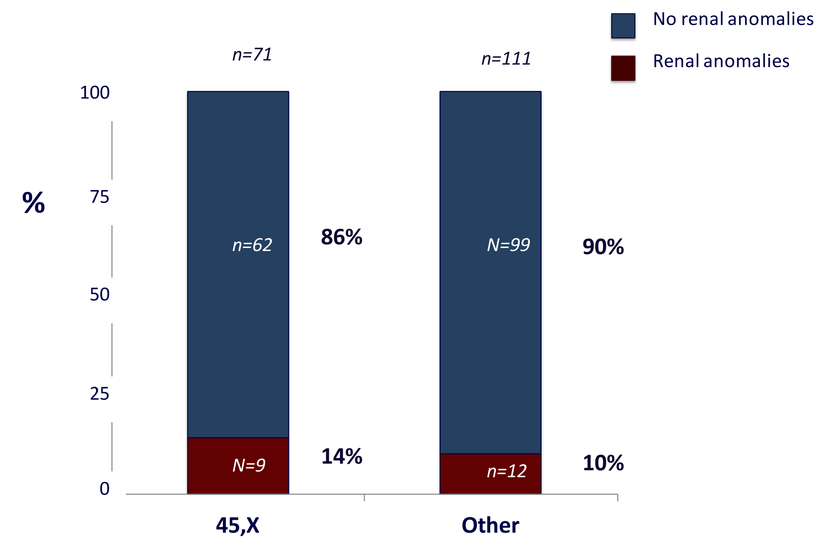
Twenty-one girls (11.5%) were identified with renal/urological anomalies: 15 (71%) horseshoe kidney (HSK), 1 (4.7%) malrotation, 2 (9.5%) single kidney, 1 (4.7%) duplex collecting system (DCS) associated with renal arteries abnormalities and vesico-ureteric reflux (VUR), 1 (4.7%) pelvic kidney and 1 (4.7%) crossed fused ectopia associated with DCS.



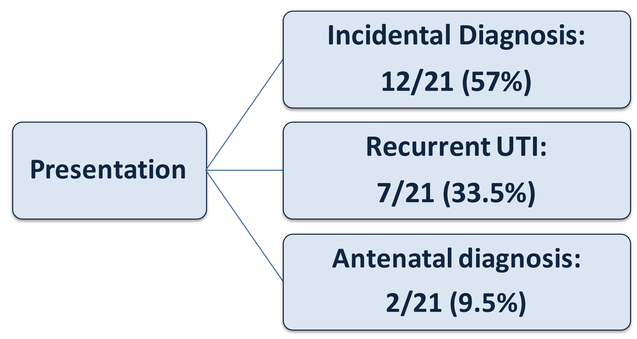
5 (33%) patients with HSKs had associated urological anomalies: vesico-ureteric reflux (1), DCS and VUR (1), pelvic-ureteric junction obstruction (1), calyceal and pelvic dilatation (2).



43% of our population had monosomic karyotype vs 57% with mosaicism. A significant correlation between karyotype and specific renal abnormalities was not found *(p =0.265 – OR 1.49 (95%CI 0.598,3.716))*



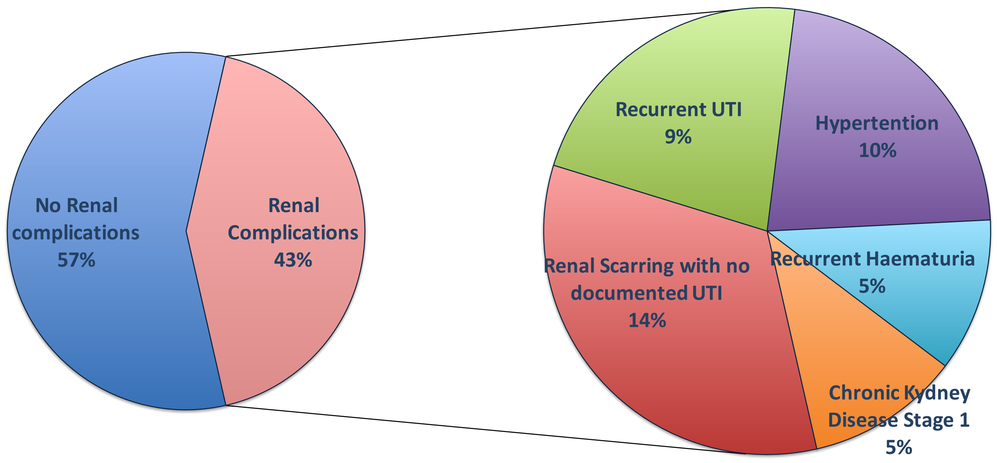
Clinical practice has changed from 1990 onwards, with abdominal US performed routinely at TS diagnosis.



About 34% of our population was diagnosed following recurrent UTIs, while 57% had an incidental diagnosis. Two patients (born in 2011 and 2013) had antenatal diagnosis: one left renal dilatation and one multicystic right kidney with ureteric dilatation.

At the last follow up median age of our population was 32 yrs (range 2.3-35.7).
43% of them developed complications as described In the figure below.

Only 1 patient (4,7%) required surgical intervention (pyeloplasty).



Conclusions

Renal anomalies were detected in about 12% of our large series of patients with TS. Last follow-up shows that 43% of our study population developed renal complaints. We recommend to perform an abdominal ultrasound at TS diagnosis and at transition, a careful monitoring of Blood Pressure and a Urinalysis at each clinical visit.

55ESPE 836--P2
Syndromes : Mechanisms and Management
Laura Lucaccioni
DOI: 10.3252/pso.eu.55ESPE.2016
Poster presented at: ESPE 2016 PARIS