

Management of Thyroid Disease in Pregnancy

V Cleveley-Jones, S Gnanasambanthan, B Sharma, L Chandrarajan
University Hospital Lewisham, London

Introduction

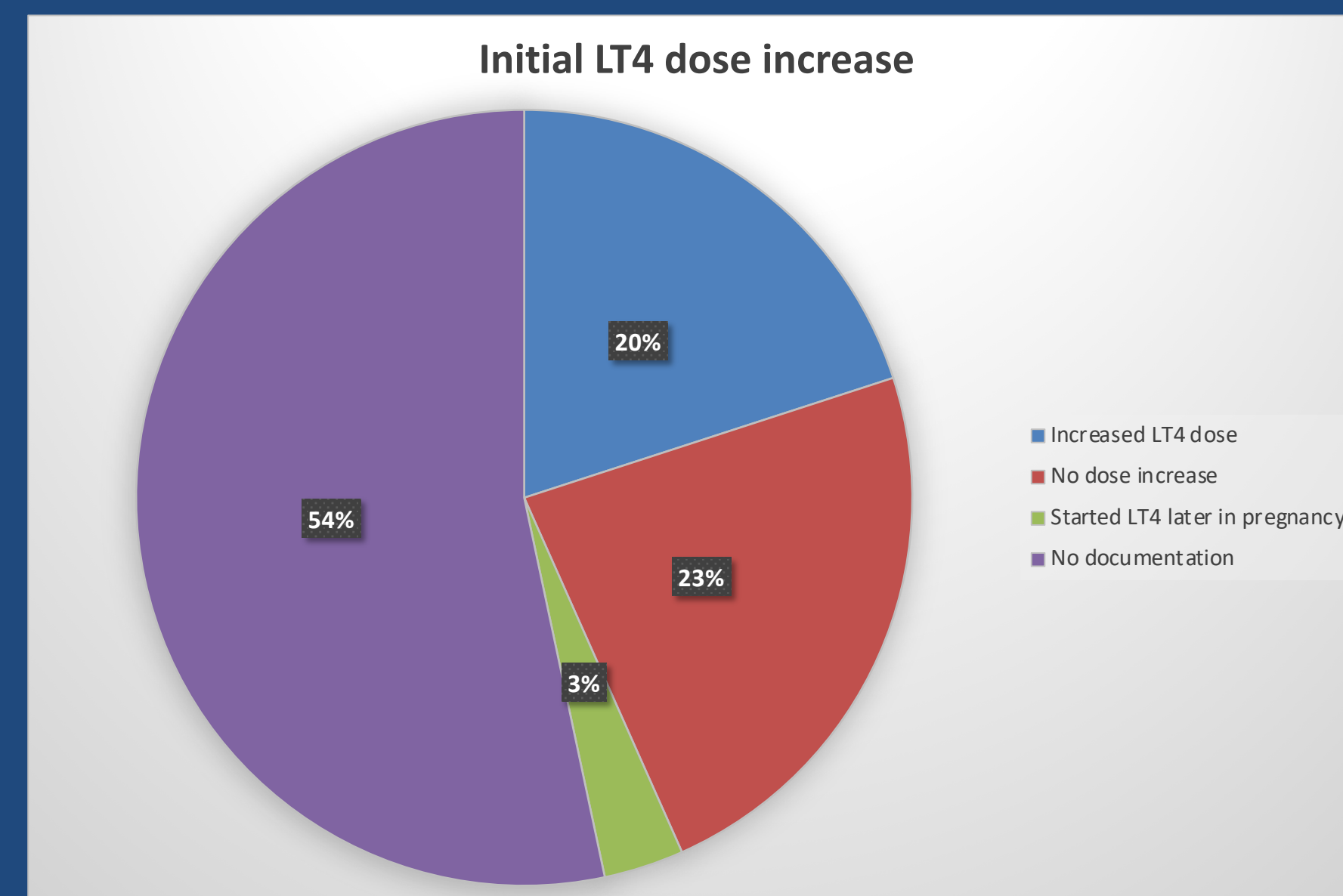
Pregnancy-related changes in thyroid function pose challenges to the management of pre-existing thyroid disease. HCG-mediated suppression of TSH and increased production of thyroglobulin and thyroxine increase a pregnant woman's thyroxine requirement in pre-existing hypothyroidism. Uncontrolled hypo- and hyperthyroidism have been associated with poor obstetric outcomes; miscarriage, preterm delivery, pre-eclampsia and fetal neurocognitive deficit. A literature review demonstrated varied management strategies, identifying the need for standardised guidelines.

Aims

Our audit aims include examining local management of thyroid disease in pregnancy, highlighting the requirement for a comprehensive guideline.

Method

A retrospective cohort study was performed reviewing 50 randomly-selected cases of thyroid disease, declared at booking, during a six-month period in 2020. 30 cases of hypothyroidism and three cases of hyperthyroidism were identified. We assessed which guideline recommendations were being followed (e.g. increase of levothyroxine dose by 25mcg at booking), which clinics patients were reviewed in, frequency of TFT monitoring, response to results using ranges cited in Jefferys et al.[1], frequency of growth scans, mode of delivery and complications.



Findings

19/30 patients were receiving levothyroxine at booking. Only 5% of the hypothyroid group had a documented increase in dose.

22 of the 30 hypothyroid patients were reviewed antenatally in a general obstetric clinic, with only five patients referred purely for hypothyroidism; 18 had other risk factors. Two patients were additionally reviewed in Endocrine clinic; one being newly-diagnosed with hypothyroidism, the other had poorly-controlled TFTs.

Jefferys et al.'s guideline advises TFTs are checked once during each trimester[1]. 50% of hypothyroidism cases met this criteria; of these only seven had stable TFTs throughout pregnancy. 21/30 patients had serial growth-scans and only one of these was solely for hypothyroidism.

Mode of delivery varied; spontaneous vaginal delivery (40%), caesarean-section - elective or emergency (37%), instrumental delivery (13%). 10% delivered abroad.

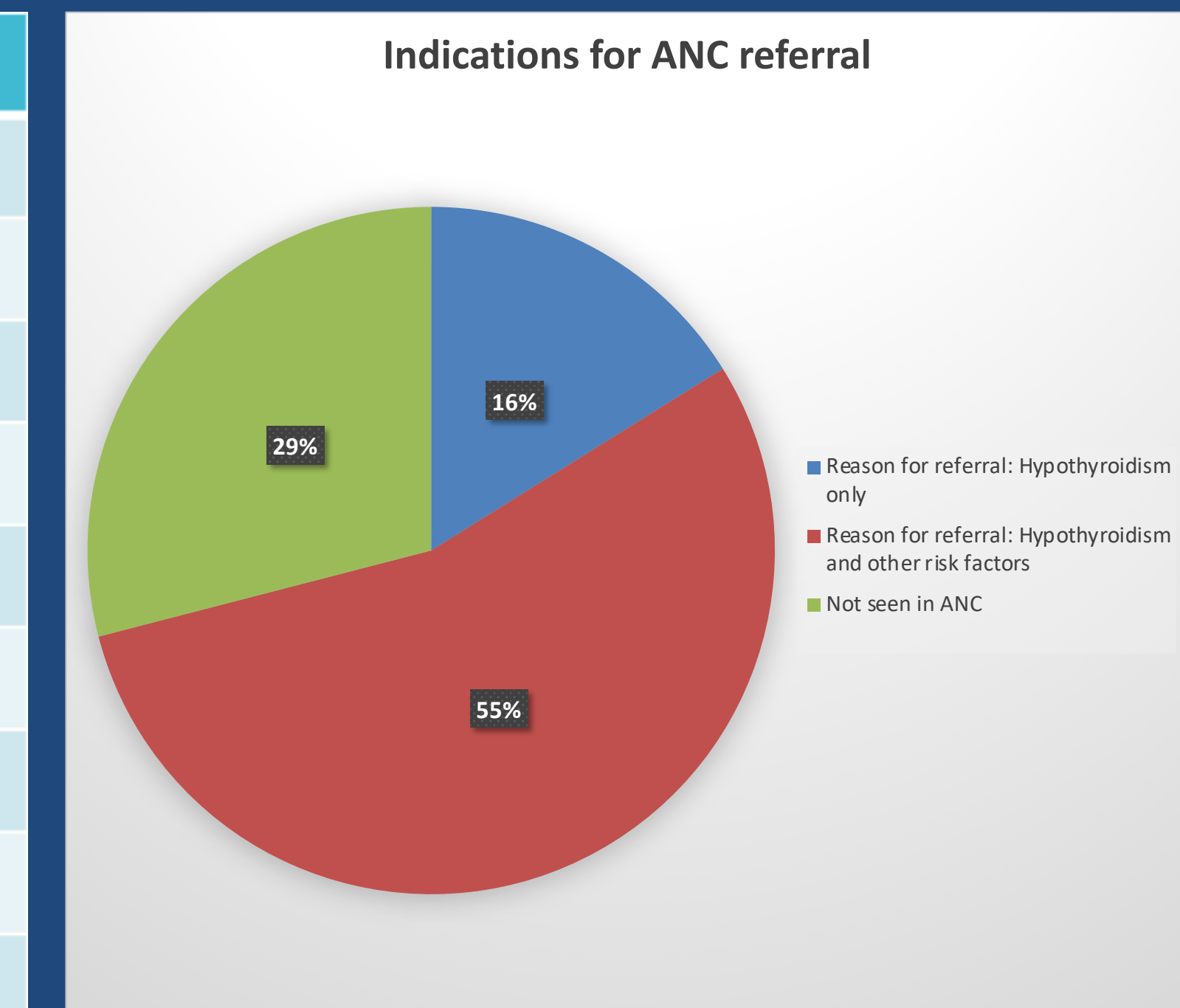
Observed obstetric complications included obstetric cholestasis, gestational diabetes, fetal growth restriction and pre-eclampsia.

Trimester	TFTs checked	Normal	Abnormal
1st	24	12	12
2nd	22	16	6
3rd	23	18	5

Serial growth scans	For thyroid indication only	For other indications
21	1	20

Mode of delivery	Number of cases
ELCS	4
EMCS	7
Forceps	4
SVD	12
Delivered abroad	2

Complication	Numbers
Miscarriage	10
OC	2
SFD	1
GDM	2
MROP	1
Multiple pregnancy	1
Postnatal neuropathy	1
PET	1
Postnatal cardiac arrest	1



Conclusion

Of the 50% of the cohort who had appropriate regular TFT levels, 53% had TFTs which were poorly controlled at some stage. This is likely to be an underestimate, as 50% of patients had insufficient frequency of monitoring. This identifies an area for improvement with a standardised protocol, TSH reference ranges and defined referral pathways, highlighting the need for a dedicated service ensuring appropriate monitoring and interpretation of results. Introduction of a local guideline with widely distributed education in the form of a webinar has been developed to improve outcomes.

References

[1] Jefferys, A, Vanderpump, M, Yasmin, E. Thyroid dysfunction and reproductive health. *The Obstetrician & Gynaecologist* 2015; 17: 39– 45.