

P301

## P301 -Kidney disease is the commonest cause of secondary hypertension in young adults

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### Background:

There is limited data regarding the relative prevalence of secondary causes of hypertension in young adults. Our regional specialist hypertension service receives unselected referrals from both primary and secondary care. We therefore sought to investigate the prevalence of secondary hypertension in adults aged under 30 referred to our clinic along with the relative frequency of each individual cause.

### Methods:

We undertook a retrospective analysis between the dates of 1/1/2014 and 24/9/2018 (56.8 months). We included all patients aged 16 to 30 inclusive referred to the hypertension service. We collected routine demographic and clinical data from clinical correspondence and information systems. All patients underwent 24 hour ambulatory blood pressure monitoring at their initial clinic visit. Hypertension was defined as an average daytime blood pressure of more than 135/85 from a minimum of 14 valid readings. Microsoft Excel was used to conduct analyses.

### Results:

143 patients were referred. Of these 16 (11%) were found not to be hypertensive. 23 (16%) were still undergoing investigation. 14 (10%) did not attend their follow-up clinic appointments. In total 90 patients completed investigations to exclude identifiable secondary causes of hypertension. Of these the median age was 26 years, 53% were male and the mean body mass index (BMI) was 31.7. 17 (19%) were regularly smoking. An identifiable secondary cause of hypertension was detected in 17/90 (19%) patients (see Table 1). Six patients had parenchymal renal disease (5 had reflux nephropathy and 1 an atrophic kidney) and 1 had fibromuscular dysplasia. Four had hypertension secondary to medications (3 due to the oral contraceptive pill and 1 secondary to prednisolone and tacrolimus immunosuppression).

### Conclusions:

Within our population of young adults with elevated blood pressure 19% had an identifiable secondary cause with renal parenchymal disease being the most common aetiology. These findings are in keeping with similar analyses in other westernised nations [1,2]. Primary hypertension is the commonest finding in this age group and our data suggest lifestyle factors are contributory in many cases. Non-attendance at follow-up clinic appointments is frequent and may hamper long-term management and health promotion.

### References:

1. Viera AJ and Neutze DM, Diagnosis of Secondary Hypertension: An Age-Based Approach, American Family Physician, 2010, 82 (12), 1471-1478
2. Van der Merwe W, Hypertension in Young Adults, The New Zealand Medical Journal, 2015, 128 (1409), 75-77