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The prevalence of polycystic ovarian syndrome (PCOS) and idiopathic intracranial hypertension (IIH) occurring together has long been debated. Historically, there is a wide range of reported occurrence of both conditions being between 15-64%. Both conditions share a common phenotype. The awareness that in a new large data study that there is a 1.5-fold increased prevalence of diagnosed PCOS in participants with IIH as compared to the controls is important. Assessment for the potential of comorbid PCOS in women with IIH as this may enable optimisation of weight and fertility management.

Keywords: Polycystic ovarian syndrome, prevalence, pseudotumour cerebri.

Dear Editor,

Idiopathic Intracranial Hypertension (IIH) typically affects reproductive aged women with obesity.[1, 2] The manifestations of this disease are increasingly being identified beyond the traditional known headache and visual symptoms.[3, 4] The prevalence of polycystic ovarian syndrome (PCOS) and idiopathic intracranial hypertension (IIH) occurring together has long been debated. Case series suggest co-existence of the two conditions in 15-64% of women with IIH.[5-8] Both are phenotypically similar with systemic metabolic dysfunction,[9-13], truncal adiposity,[13-15] insulin resistance,[9, 12] reduced fertility[16-18], gestational complications[16, 19] and an increased cardiovascular risk.[20] They are hyperandrogenic disorders but with distinct hormonal signatures.[21] The prevalence of comorbid PCOS in IIH compared to age and BMI matched controls has not been previously assessed.

In a recent population based longitudinal cohort study of >50,000 women that evaluated medication prescribing habits in women with IIH (n=3411) and population controls (n=33,495) was recently published in Neurology.[22] It reported that a higher

proportion in the IIH group had PCOS (7.4%) compared to matched population controls (4.9%) at study entry,[22] corresponding to a 1.5-fold increased prevalence of diagnosed PCOS in participants with IIH compared to the controls. This is similar to Avisar et al, who showed a 1.8-fold increase of 15.5% PCOS in IIH versus 8.9% in their general population.[5]

The 1.5 fold increased prevalence of comorbid PCOS in IIH is an important finding and supports this more recent literature[5] and refutes the earlier overestimations reported.[6-8] This is important as it may influence weight and fertility management, e.g. metformin aids weight loss when both diseases are present.[6]

Weight gain is a key precipitant in the development of IIH [23], and a recent randomised control trial has shown the benefit of weight loss in lowering raised intracranial pressure to inducing remission of the condition.[24] Weight loss targets of 5-10% are often reported and is based to the general obesity literature[25] but in clinical practice are variable and often higher amounts are required[24, 26, 27] and can be even more challenging in certain scenarios including pregnancy.[28] Weight loss in PCOS has been achieved through lifestyle management,[29] medical management, i.e. Orlistat[30-32], Metformin[31, 32] and GLP-1 receptor agonists[33], and bariatric surgery especially in those unresponsive to lifestyle-medical treatment.[26] Medical management of comorbid PCOS may aid the weight loss required for IIH disease control. Metformin has been shown to aid weight loss in IIH where comorbid PCOS is present[6] although this is not part of routine clinical care and not currently a recommendation within IIH management.[3]

Additional ovulatory benefits have been shown for weight loss prior to pharmacotherapy use for infertility.[34, 35] Where fertility issues are present the use of

medications, i.e. clomiphene citrate, letrozole and metformin, are recommended[17] and could be beneficial in this illustrated combined cohort.

We recommend assessing for the potential of comorbid PCOS in IIH patients as this may enable optimisation of weight and fertility management options. What is yet to be determined is whether the combination of these disorders confers additional risks to vision, headache or cardiovascular morbidity.

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Declaration of Interest:

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