**Introduction**

Iron deficiency is the most common cause of anaemia in acquired heart disease. Whilst there is abundance of literature on anaemia in such patients, it is lacking in patients with acquired congenital heart disease (ACHD) and adds to challenges in management. Over a third of patients with hypoxic congenital heart disease are iron deficient but missed due to the lack of microcytosis and hypochromia on blood tests. This is further complicated by questionable patient compliance with oral medication due to its notorious side effect profile, despite its proven benefits in patients with congenital heart disease. Insufficient identification and management can contribute to a three-fold increase in mortality. Therefore, our objectives were to assess compliance with iron tablets and any advice given to encourage continued use.

**Methods**

Our aims were two-fold: 1) Assess compliance rates in taking iron supplements and reasons behind non-compliance; 2) Evaluate common side effects experienced and their recall of advice given to minimise this, if any. We identified all ACHD patients seen by cardiologists as inpatient or outpatient in the year 2020, a total of 699 patients. From this, hospital and GP records suggested 53 patients with a history of iron supplementation. We formulated a questionnaire to collect qualitative data assessing the compliance of iron supplements, its side effects profile and advice received in conjunction with NICE guidelines. Reasons for exclusion were no iron supplements on prescription and death.

**Results**

We were able to contact 69.8% of patients (n=53) successfully and 54.7% of the original sample size (n=29) confirmed being on iron therapy and consented to participate in the questionnaire. Our evaluation found a compliance rate of 86.2% (n=25). Reasons for non-compliance were the tablet size being too big, forgetting to take the tablet, polypharmacy and side effects. Whilst 51.7% of patients (n=15) reported improvement in fatigue, 55.2% of patients (n=16) reported side effects (figure 1). For the 16 patients, side effects included constipation (56.3%, n=9), change in stool colour (43.8%, n=7), diarrhoea (6.3%, n=1) and abdominal pain (12.5%, n=2). Around 82.8% (n=24) were unable to recall receiving advice on taking iron tablets (figure 2). Of those that had received advice (n=5), 80.0% (n=4) were advised to take iron with orange juice and 20.0% advised to take it with food.

**Conclusion**

Our compliance rates were higher in comparison to those reported in other studies, which could be explained by improvement in symptoms, awareness of chronicity and severity of their congenital heart disease and resilience of side effects. This would need to be explored further. However, it is evident a large number of patients reported side effects and lack of education to minimise this. Indeed, these results are confounded by limitations including small sample size and recall bias. Despite this, there is room for improvement in maintaining patient education in compliance of iron supplements to minimise mortality and morbidity. We propose small pocket size education cards to educate and encourage patients how to take their iron supplements, minimise side effects and improve compliance.

**Conflict of Interest** None

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**References**


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