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Routine NSAID Prescription after Treatment for Varicose Veins: A Feasibility Study

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INTRODUCTION

The NHS in England performs more than 30,000 procedures annually to treat superficial venous incompetence (SVI) with the aim of improving patients' quality of life. However, post-procedural pain persists in more than 40% of patients at 6 weeks. Routine prescription of non-steroidal anti-inflammatory drugs (NSAIDs) may have a role in managing post-treatment pain.

AIM

The aim of this study is to investigate the feasibility of patient recruitment, acceptability, and adherence to a regular prescription of NSAIDs following SVI treatment. The results of this study will be used to inform the design of a future trial to establish the role of regular NSAIDs in managing post-treatment pain for SVI.

METHODS

Design

This study was a prospective, single-arm feasibility study with comparison to a propensity score matched (PSM) cohort of patients from a previously published RCT. Patients in the control group were treated with endovenous thermal ablation (EVLA) and took over-the-counter analgesia as required post treatment.

Eligibility criteria

All consenting adult patients undergoing EVLA with or without concomitant phlebectomy under the care of a vascular surgeon at Spire Hull and Hull University Teaching Hospitals (HUTH), United Kingdom were eligible for recruitment. Patients were excluded if they had a contraindication to NSAIDs such as an allergy, asthma or gastric ulceration, or were already taking NSAIDs for preexisting conditions.

Recruitment and follow up

Recruitment took place from September to November 2024. Patients were given 14 days post-treatment to return their diaries. If the diary was not received within this period, a follow-up phone call was made. Patients who were uncontactable on two separate occasions were deemed lost to follow up.

Intervention

Baseline data from patients who consented for the study were obtained. Post-treatment, each patient was prescribed a 5-day course of 400mg of ibuprofen, thrice daily, in addition to 20mg of omeprazole once daily. On discharge, patients were given a paper diary to record the number of ibuprofen tablets taken, and their daily pain scores post-treatment. A stamped addressed envelope was also included for patients to return the completed diary.

Outcomes

Feasibility outcomes of this study were availability of study drugs, rate of patient recruitment, adherence to prescribed NSAID, completeness of study data, and loss to follow up. Clinical outcomes were post-procedural pain scores measured on a visual analogue scale (VAS), reported side effects from the intervention, and the rate of post-treatment healthcare contact within a week. This included visiting a minor injuries or emergency department, and contacting the vascular unit or emergency services for patient concerns relating to their treatment for SVI.

Diary completeness was achieved only when a pain score was recorded for each of the 7 post-treatment days. Adherence to ibuprofen was considered complete if patients reported taking ≥80% (12 doses) of the prescribed NSAID tablets irrespective of Omeprazole adherence.

Approval

This study was registered with the Clinical Audit and Effectiveness Team HUTH.

RESULTS

Participant flow

56 participants were screened for eligibility during the study period; 7(13%) met exclusion criteria, 11(20%) refused participation and the procedures of 2(4%) patients were canceled. Of the 36 patients allocated to intervention, 11(31%) failed to return their pain diaries, and 25(69%) patients were included in analysis; *Table (1)*. Feasibility outcomes are summarised in *Table (2)*.

Variables		Intervention group N= 25 (%)	Control group N= 25 (%)
Sex	Male	13 (52)	11 (44)
	Female	12 (48)	14 (56)
Side treated	Right	15 (60)	14 (56)
	Left	10 (40)	11 (44)
Vein treated	GSV	19 (76)	22 (84.6)
	SSV	3 (12)	3 (11.5)
	ASV	1 (4)	0 (0)
	ATLB	1 (4)	1 (4)
Mean age (years)		54.4	52.0
Mean BMI (kg/m^2)		29.4	27.6
Mean length of vein treated (cm)		42.8	40.8
Concomitant phlebectomy		23 (92)	25 (100)

Table (1): Patient demographics

Feasibility outcomes (N = 25)		n (%)
Eligibility rate		49 (88%)
Recruitment rate		36 (73%)
Adherence to ibuprofen		17 (68)
Adverse effects from ibuprofen use	Abdominal pain	0 (0)
	Heartburn/indigestion	1 (4)
	Cough	2 (8)
	Nausea	2 (8)
	Shortness of breath	1 (4)
	Headache	4 (16)
Diary return rate		25 (69)
Diary completeness (% of total returned)		18 (72)
Post-treatment healthcare contact		2 (8)

Table (2): Feasibility outcomes and reported side effects from intervention.

There was no significant difference in post procedural pain between patients assigned to NSAIDS and their PSM counterparts from the previous RCT; *Figure (1)*.

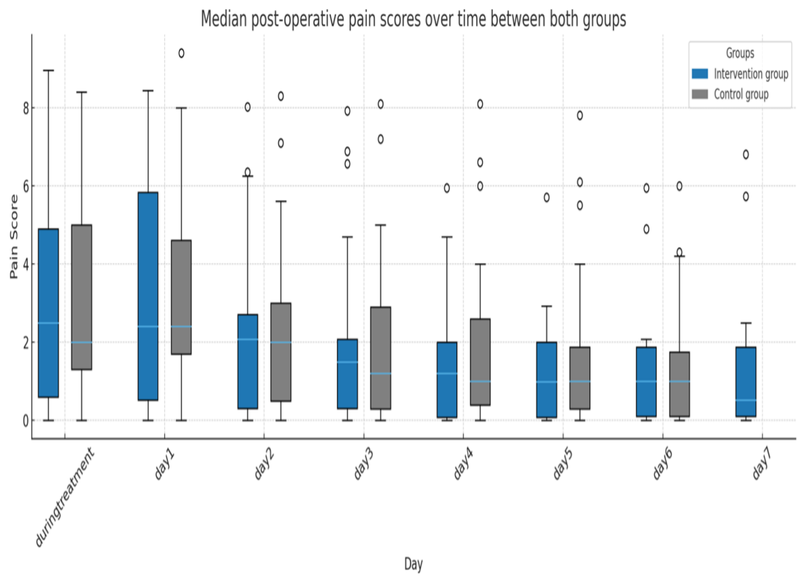

Figure (1): Daily pain scores between both groups.

CONCLUSION

- **A fully powered study of the use of NSAIDs for post procedural SVI is feasible.**
- **Almost half of screened patients were recruited and completed the study within 1 month.**
- **Further research is needed to refine the methods of any future powered studies, including the duration of intervention, timing of follow up visits, and prioritisation of outcome measures.**

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