

How to manage stroke patients with underlying patent foramen ovale (PFO) based on data from stroke ward

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Introduction

A patent foramen ovale (PFO) is a window in the heart that does not close the way it should after birth. The small flap like opening is between the right and left upper chambers of the heart (atria). It is present in 20-25 % of the population.

Objectives

The objective of this audit was to develop a pathway for investigating and managing patients presenting with stroke with underlying PFO for the Dudley Group NHS Foundation Trust

Methodology

Retrospective study done based on data from stroke clinic patients who were admitted with stroke and found to have PFO. During investigating and managing these patients the follow information was extracted, these were: clinical symptoms, age, gender, occupation, smoking history, alcohol history, family history of migraine, personal history of migraine, previous history of stroke, family history of stroke, use of recreational drugs.

Investigations

Bloods: young stroke screening i.e. ESR, ANA, ACE, plasma lactate, lupus anticoagulant, IgG anti-cardiolipin antibody, syphilis serology if aged less than 40, homocysteine levels, alpha-galactosidase, thrombophilia screening after PFO confirmation
Heart Tracing: ECG, prolonged ECG monitoring, ECHO (TTE/TOE/saline contrast bubble ECHO)
Imaging: Carotid Doppler, MRI head, MRA brain

Fig 2. Gender

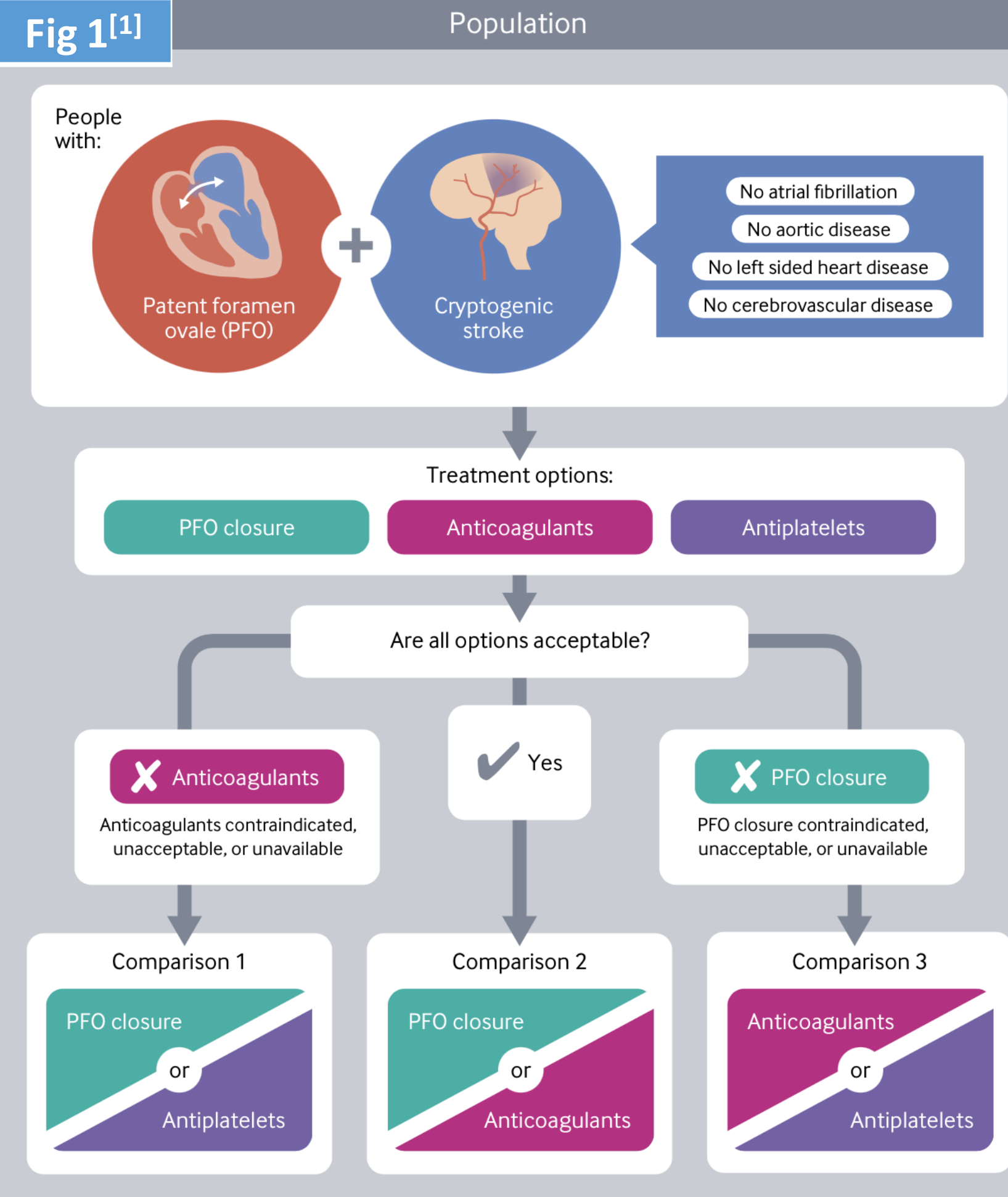
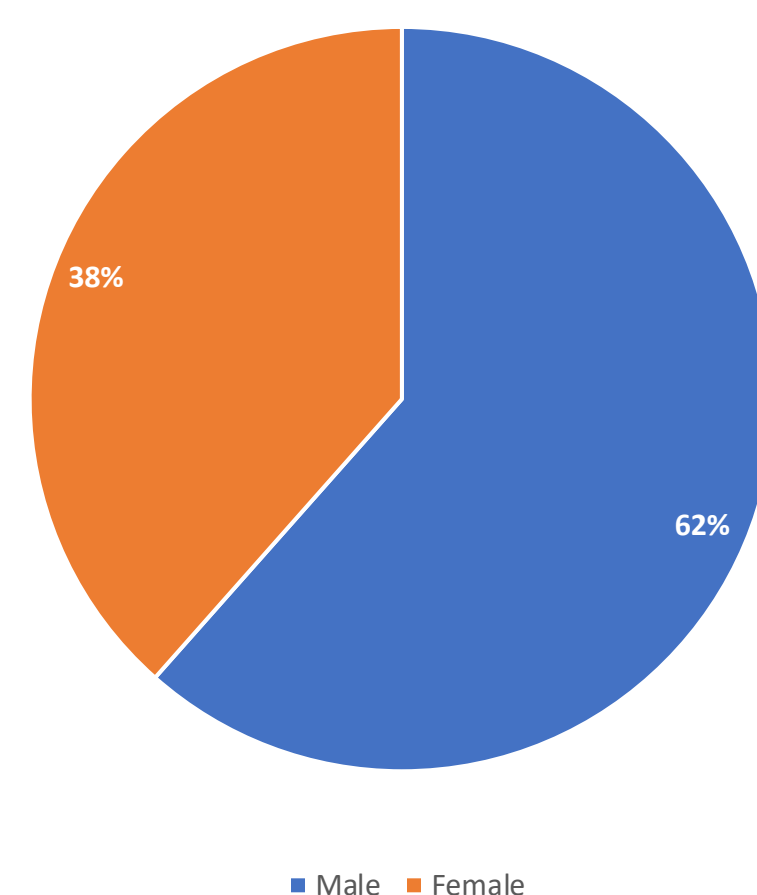
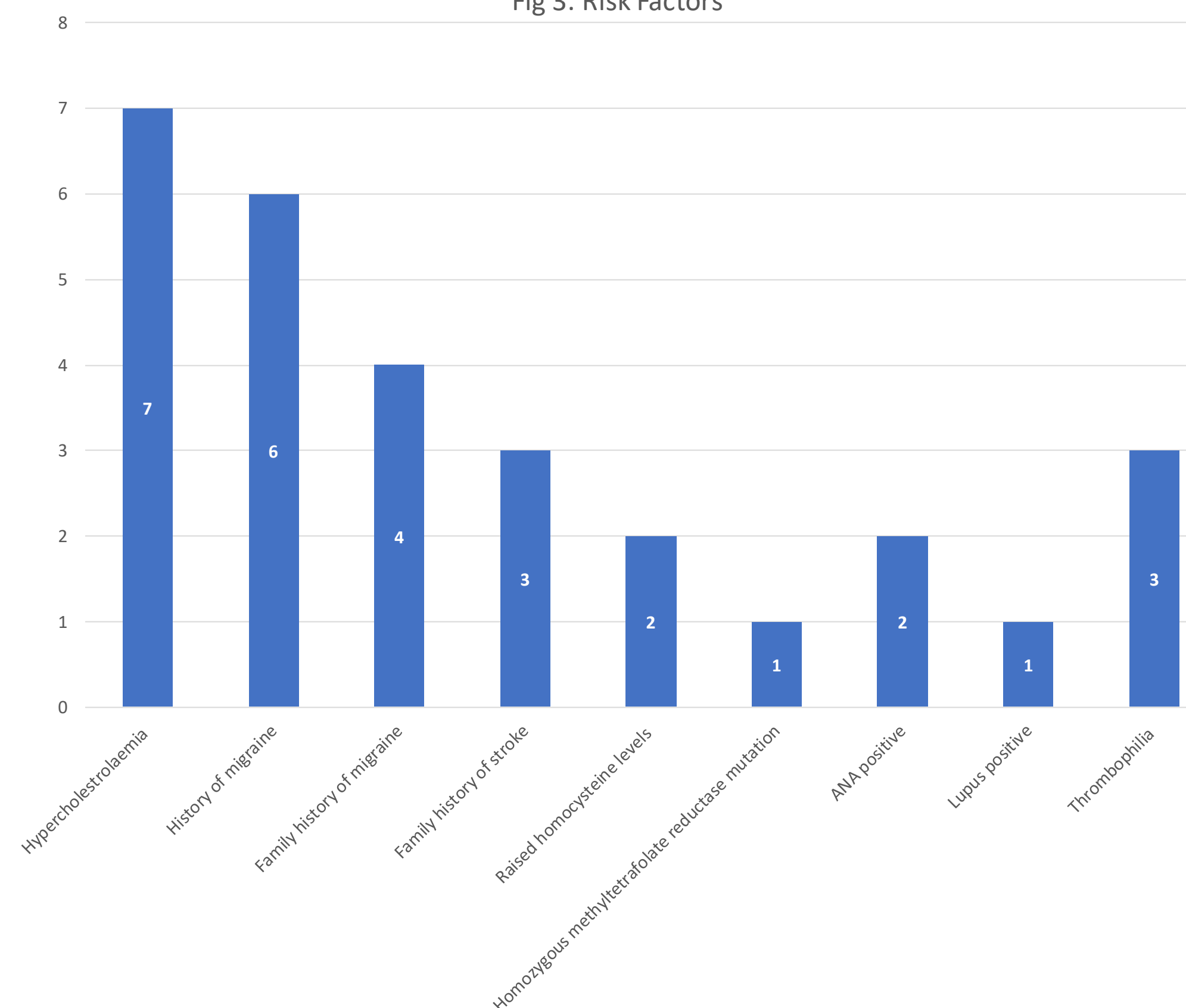


Fig 3. Risk Factors



Results

A total of 13 patients were taken into consideration for this audit. Out of these patients 4 had a family history of migraine, 3 had family history of stroke, 3 patients were positive for thrombophilia screening, 2 patients were ANA positive and 1 patient was lupus positive. A total 7 patients were referred for ILR insertion with 2 referred for anticoagulation. Device closure was performed in 5 patients at Queen Elizabeth Hospital Birmingham. All these patients had ECHO's which were either transthoracic, saline contrast bubble ECHO and transoesophageal. The ECHO's revealed that most of the PFOs were tunnel PFO in the interatrial septum, amongst all these patients the data revealed that one patient had PFO with right to left shunt.

Conclusion

The audit focused on stroke patients with PFO, their presentation in the clinical setup, how the patients were investigated and later managed. This audit helped in developing a pathway for all the doctors to manage such patients in Russells Hall Hospital, Dudley (with input from Queen Elizabeth Hospital, Birmingham)

References and Acknowledgements

[1] BMJ 2018;362:k2515. [internet]. [cited 2023 October 28]. Available from: <https://www.bmj.com/content/362/bmj.k2515>
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Fig 4. Management

