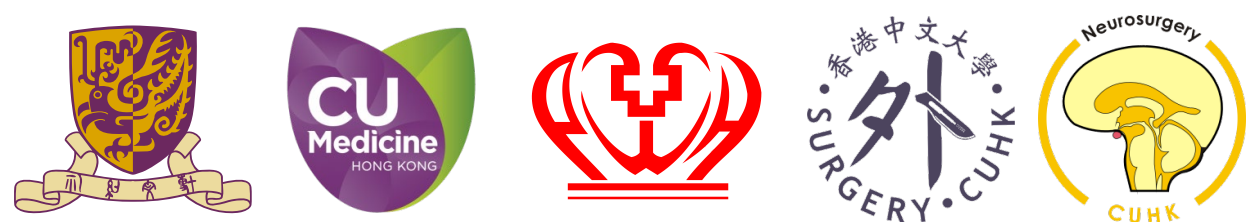


LUMBAR EPIDURAL BLOOD PATCH: A SAFE TREATMENT FOR INTRACRANIAL HYPOTENSION

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INTRODUCTION

- Lumbar epidural blood patch (LEBP) has been demonstrated to exhibit efficacy¹ for the treatment of Spontaneous Intracranial Hypotension (SIH)
- SIH is primarily described as a postural orthostatic headache², although not demonstrated in all patients. Other clinical features may include nausea, vomiting, meningism, and cochlear-vestibular signs.
- A surgical method of management is LEBP, which involves the injection of 10-20ml of autologous blood into the epidural space at the thoracolumbar region.
- Underlying pathophysiology of SIH: 1) Leakage of CSF via dural defect³, 2) Reversal of CSF-hematic gradient causing over drainage of blood from epidural spinal network⁴
- We evaluated the utility of LEBP injections in the management of SIH and proposed a management algorithm suitable for diagnosis and treatment of SIH.



METHODS

- We retrospectively identified 14 patients who received LEBP at the Prince of Wales Hospital (mean age: 46.5 years, range 25-69 years)
- Cases were reviewed through the analysis of clinical evidence, including radiological images, follow-up consultation notes.
- LEBP was delivered by a team of neurosurgeons and/or anesthetists at the lumbar spine region (L2-L5), where 20-30ml of autologous blood was taken from the patient’s arm and injected into the patient’s spinal region.

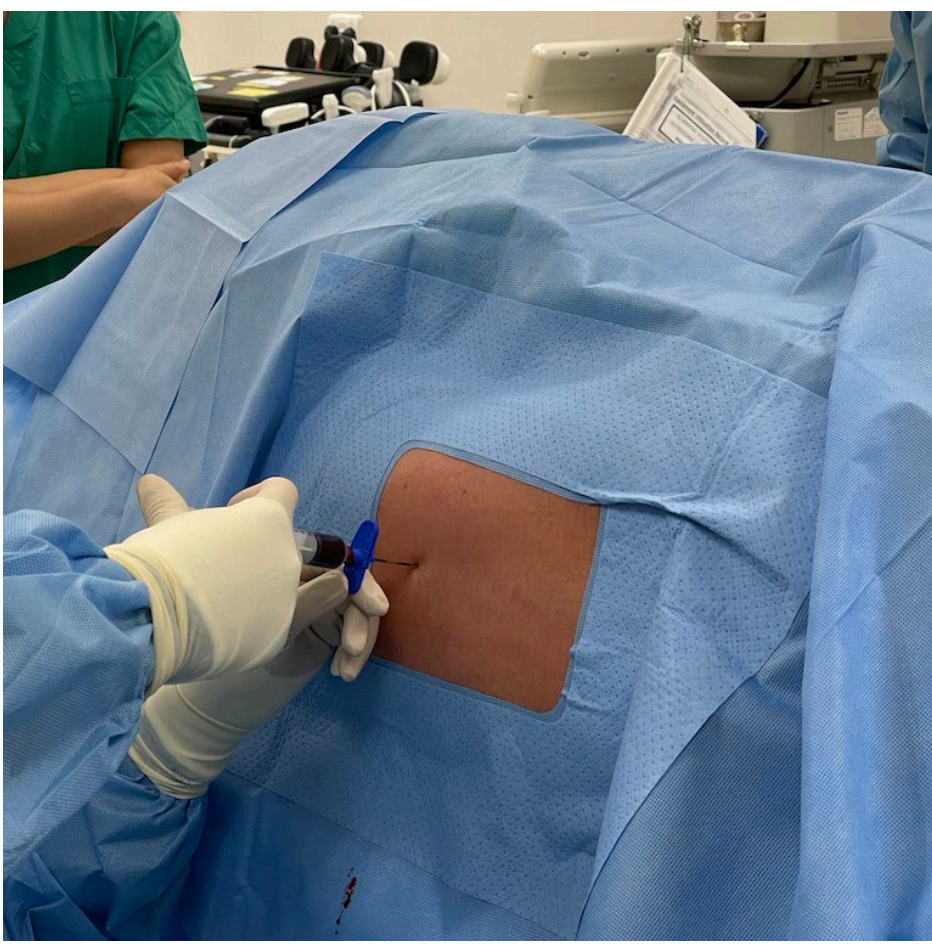


Figure 1. Procedure of LEBP injections

RESULTS

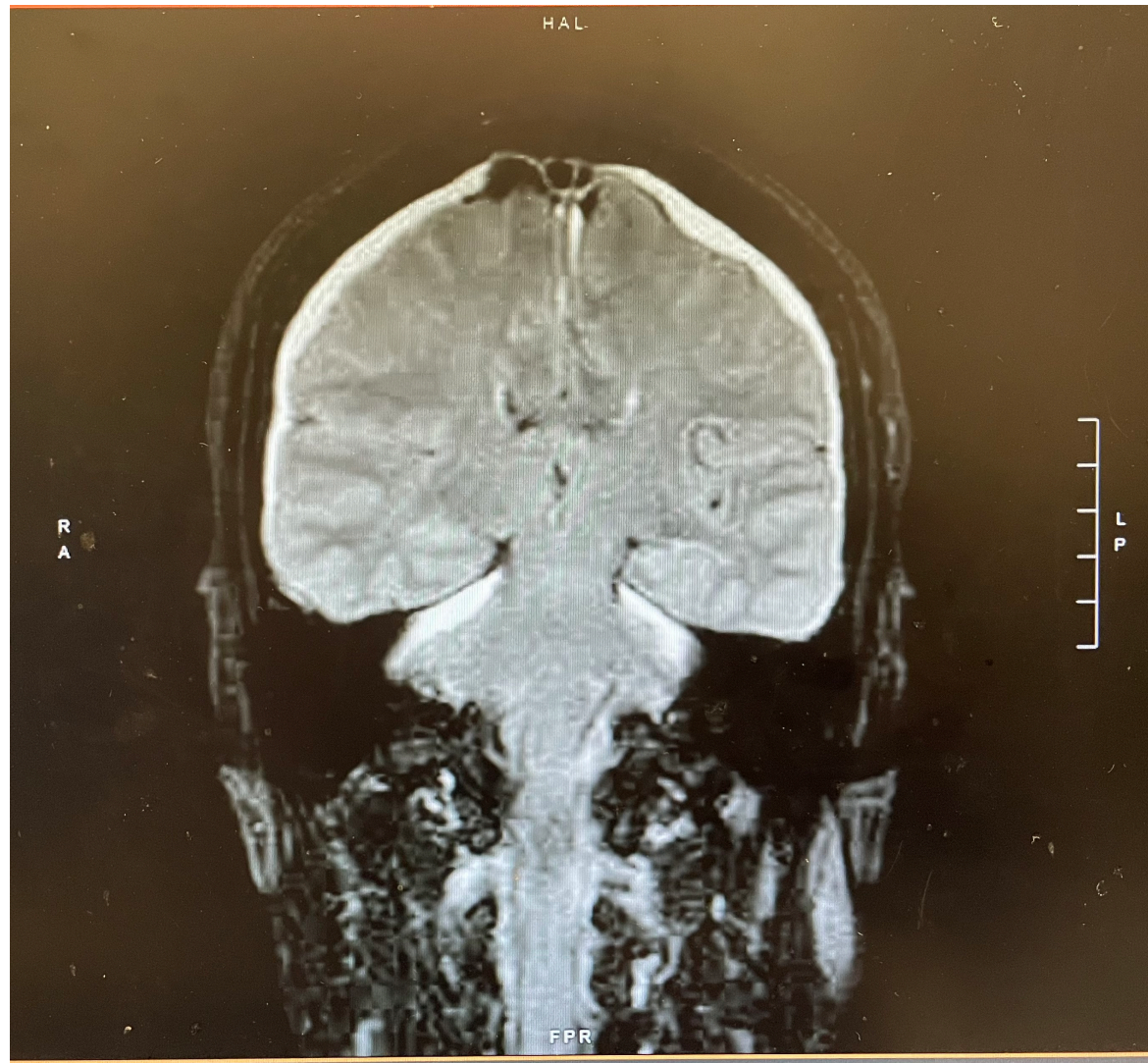


Figure 2. Pachymeningeal enhancement



Figure 3. Brain sagging

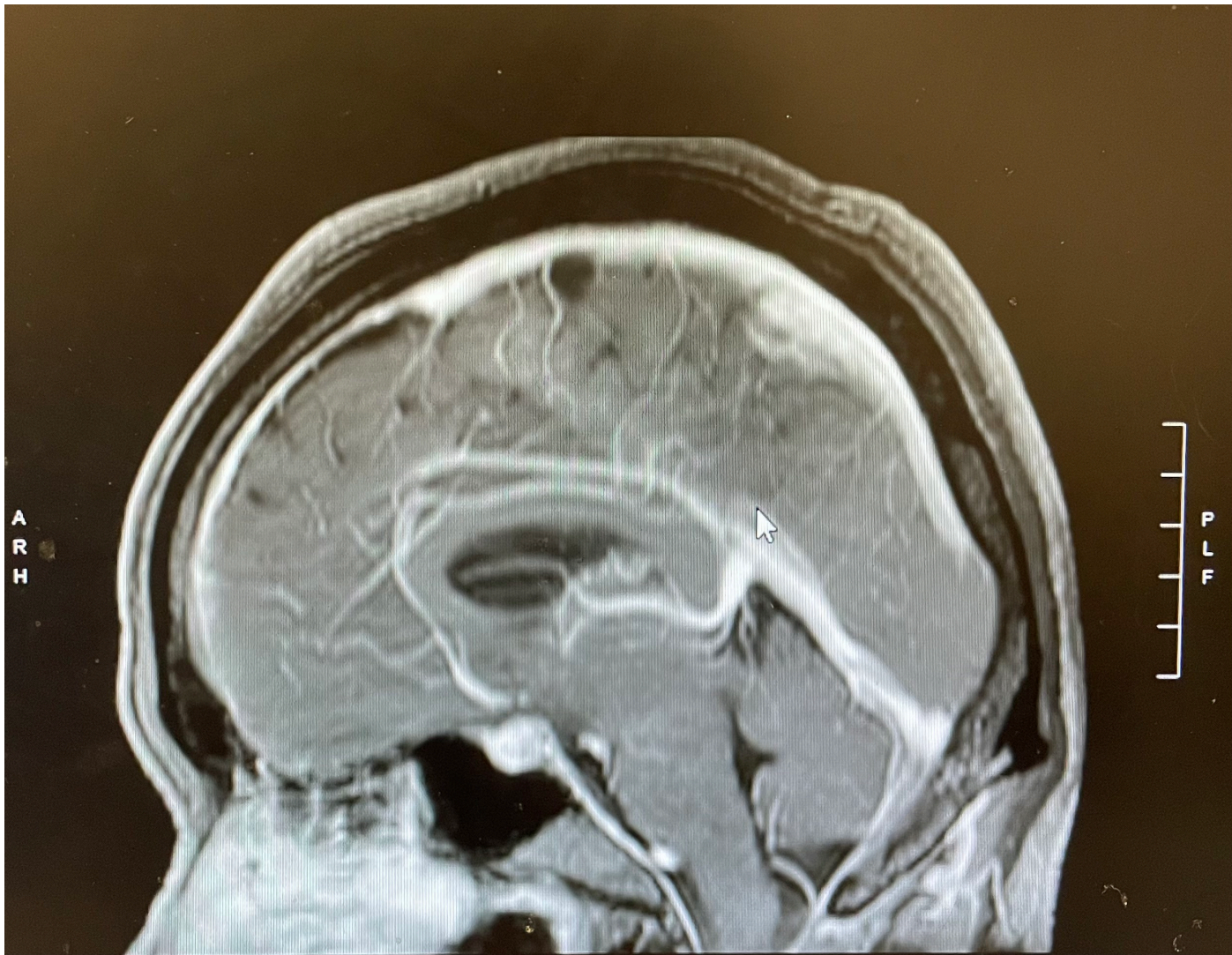


Figure 4. Pituitary hyperemia

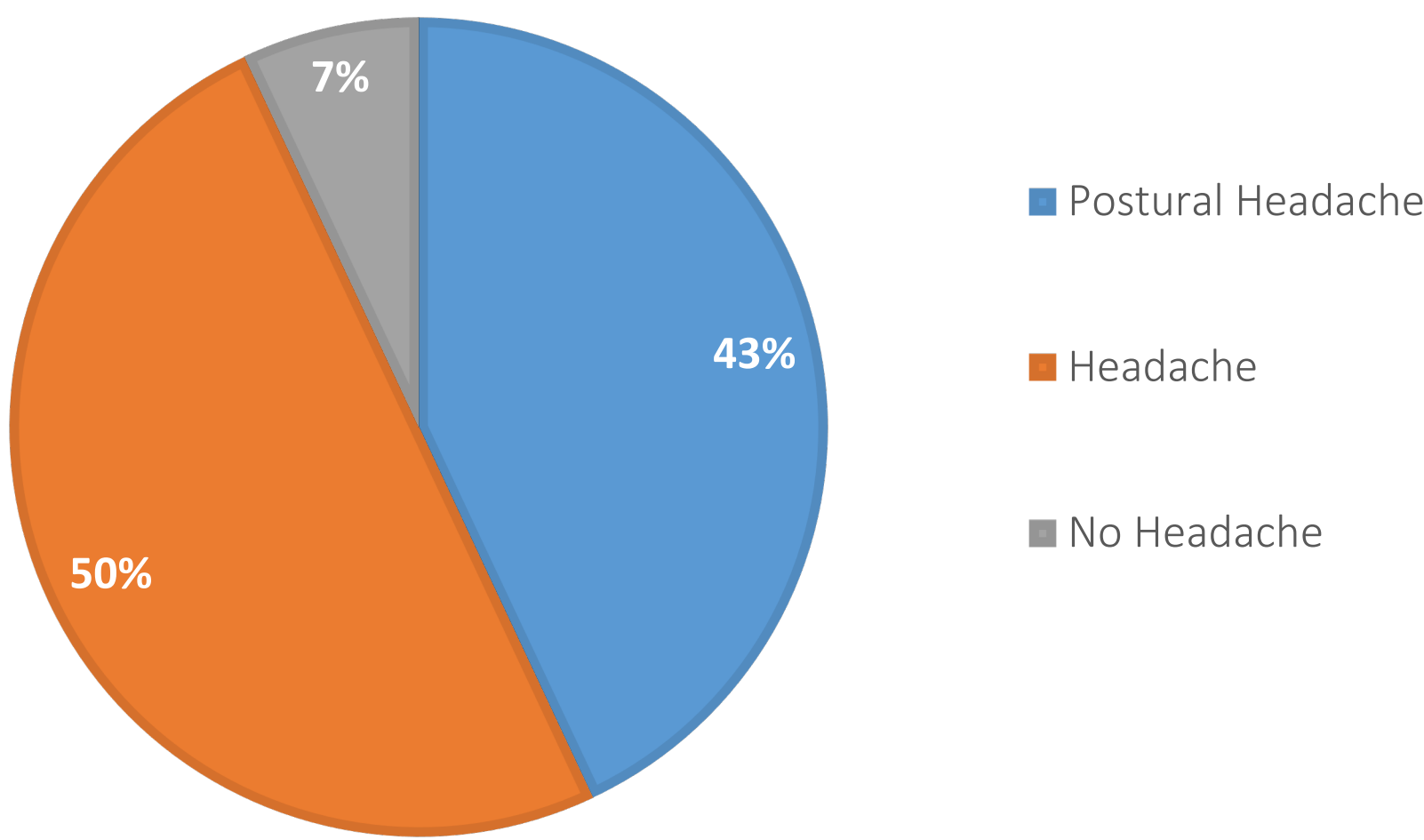


Figure 5. Percentage of patients presenting with headache

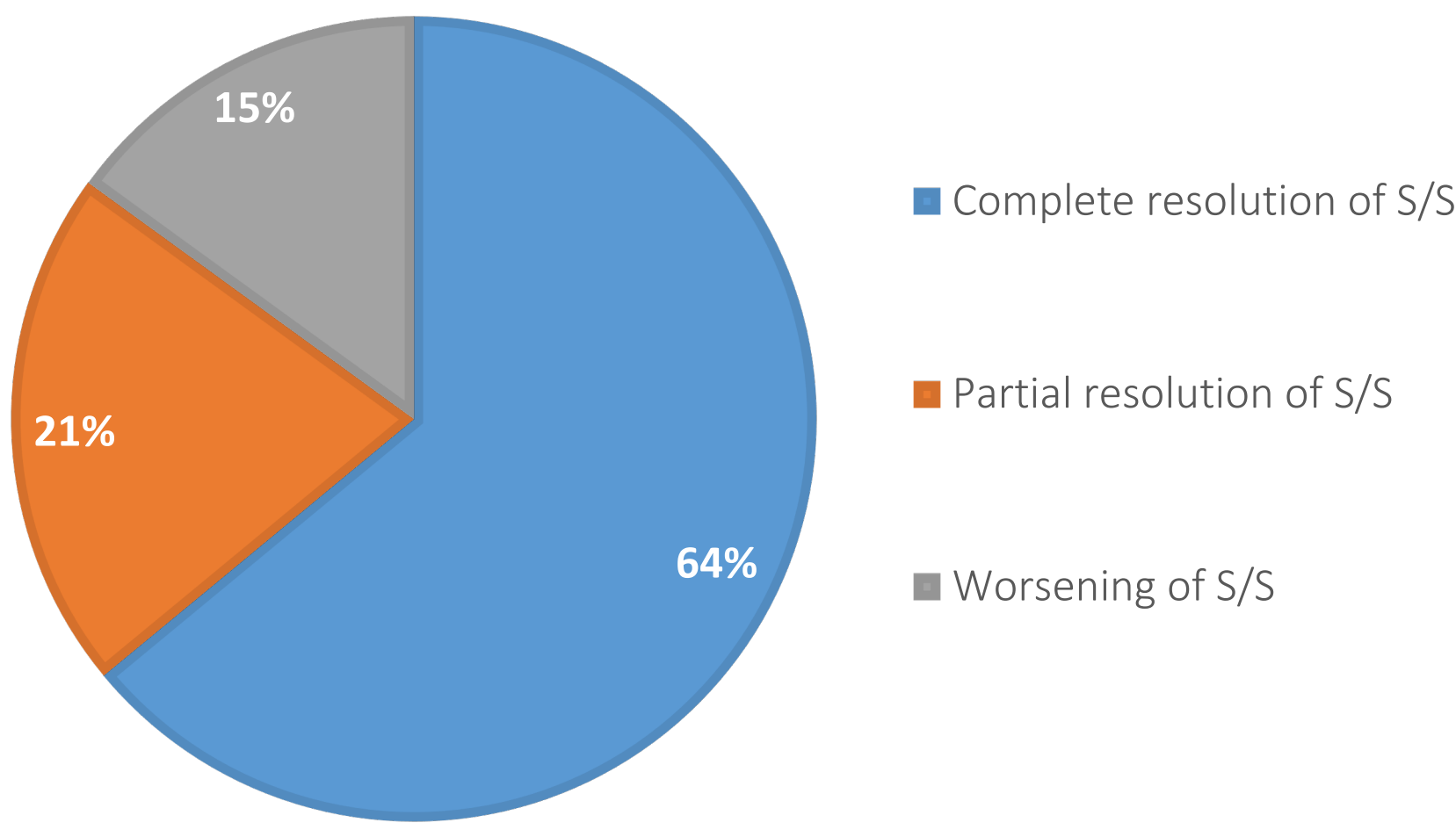


Figure 6. Resolution of symptoms post-LEBP

- All patients demonstrated at least 1 typical pathognomonic MRI feature
- 0 patients had a documented radiological CSF leak

CONCLUSION AND FUTURE DIRECTIONS

- Diagnosis of SIH can be made by MRI brain with contrast after clinical suspicion
- LEBP will yield symptom improvement despite the lack of radiological CSF dural leak
- Our results does indeed support that SIH may indeed be associated with over drainage of venous blood from the epidural spinal vein network, facilitating CSF aspiration and development of SIH

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