

# Transoral & Intrathoracic Migration of Ventriculoperitoneal Shunt : Is Surgical Intervention Required



**NazrulHadi A.Razak**<sup>1</sup>, M.Yusran Othman<sup>1</sup>, Zakaria Zahari<sup>1</sup>, Marina Sophianna Marzukie<sup>2</sup>

<sup>1</sup>Department of Paediatric Surgery, Women & Children Hospital Kuala Lumpur, Malaysia

<sup>2</sup>Department of Radiology, Women & Children Hospital Kuala Lumpur, Malaysia

## Introduction

Complications of ventriculoperitoneal shunt may occur anywhere along their course, from the cerebral ventricle to the peritoneal cavity. Among these potentials, intrathoracic migration of shunts is unusual and potentially serious. Our purpose of presenting this case series were to share our experiences in two cases of transoral & intrathoracic migration of ventriculoperitoneal (VP) shunts.

## Case Series

First patient was a 1-year old boy who had right VP shunt for TB meningitis with hydrocephalus. He presented with raised intracranial pressure symptoms and shunt series radiograph showed migration of VP shunt's tip to the right thoracic cavity. CT scan revealed the tip was at right middle lobe (figure 1) with small loculated pneumothorax (figure 2). Otherwise he had no respiratory symptoms.

Second patient was a 2-year old boy with intraventricular hemorrhage during neonatal period underwent bilateral burr-hole operation and complicated with hydrocephalus at 6 months requiring VP shunt. He presented with a week history of persistent cough and tip of VP shunt protruding out from the mouth. CT scan showed an intrathoracic shunt migration piercing the diaphragm entering right lower lobe, bronchus, trachea and oropharynx (figure 3). No pneumothorax or effusion.

Both patients were brought to the operation theater for their VP shunts to be externalised transabdominally, but the distal portion of the catheter was pulled out per orally for the second patient. They had no evidence of air leak upon positive pressure ventilation and did not require any chest drainage. Both patients were then extubated successfully with no significant respiratory distress.

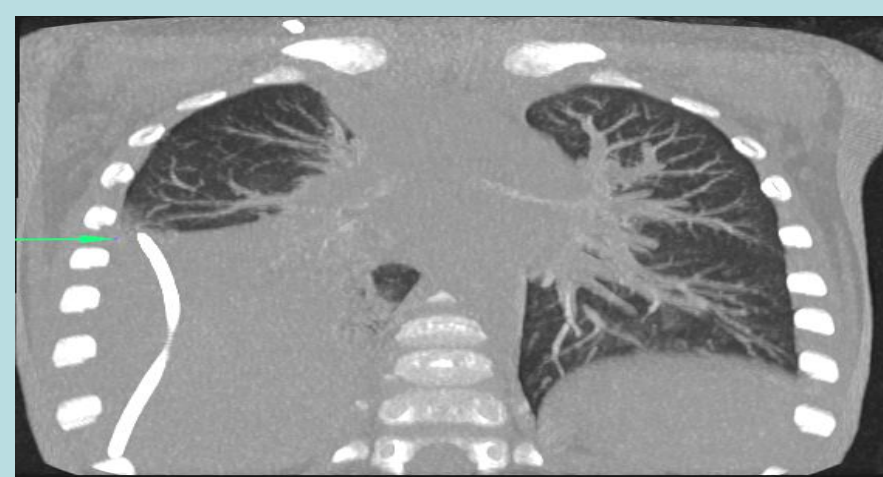


Figure 1

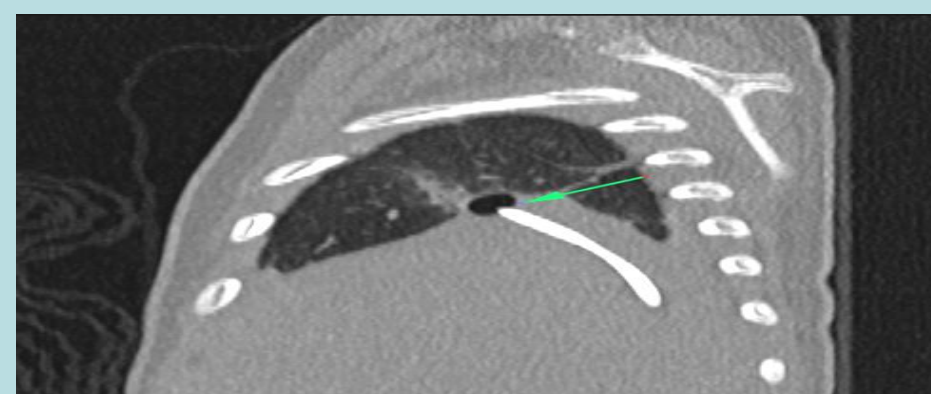


Figure 2

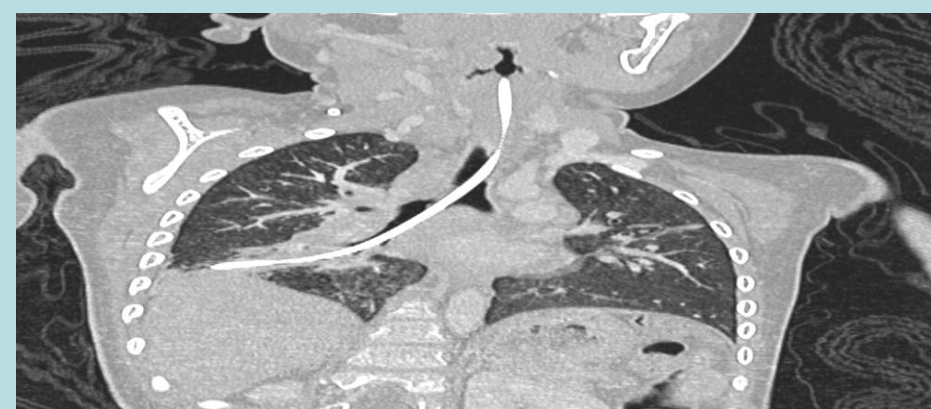


Figure 3



## Discussion

Intrathoracic migration of ventriculoperitoneal shunt can be transdiaphragmatic or supradiaphragmatic. A lower thoracotomy incision can be made to remove the shunt, since it will be easier to reach the diaphragm<sup>1</sup>. Thoracocentesis and shunt revisions are also other common therapeutic approaches<sup>2</sup>. The treatment of this complication is to remove the shunt as soon as diagnosed promptly.

## Conclusion

From these series, airway injury caused by a migrated VP shunt does not necessarily require any surgical intervention and can be treated non-operatively.

## References:

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