



# Incidental Arachnoid Cyst Masked as Dementia: Proper Evaluation and Attention to Detail

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## Case Description

Case of an 80-year-old male patient who was found lost wandering the streets of his hometown.

## Past Medical History

- Neurocognitive disorder, hypothyroidism, low back pain
- Open angle glaucoma, astigmatism, presbyopia, bilateral age-related cataract
- Hypertension, diabetes mellitus type 2, mixed hyperlipidemia

## Emergency Department

- Symptoms: altered mental status, dehydrated and weak
- Physical exam: unremarkable
- Presumptive diagnosis: pneumonia
- Subsequent imaging/work up confirmed acute cholecystitis

## PM&R Consult

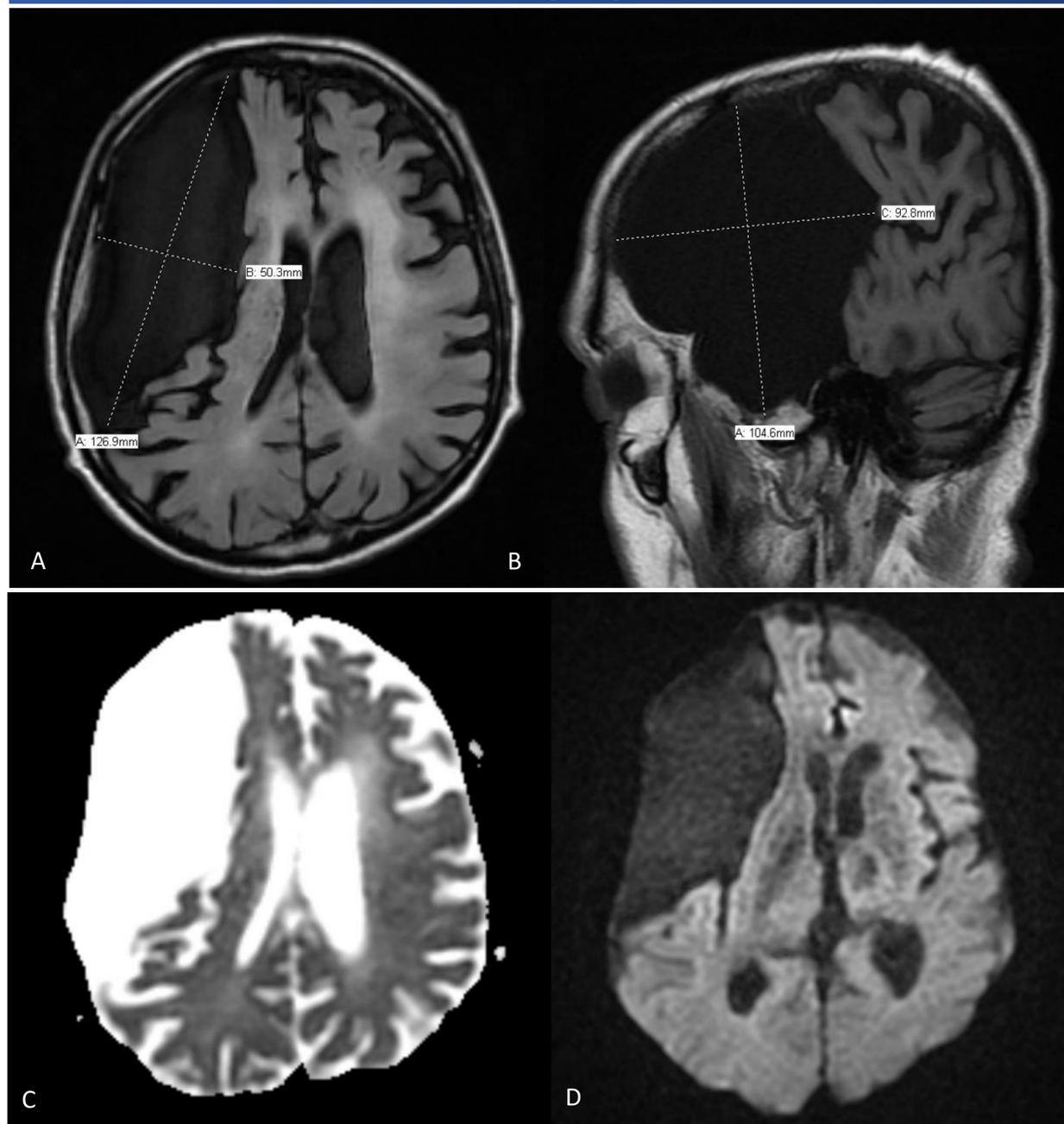
- Physical exam: right-sided hemiparesis, balance difficulty, and upper motor neuron signs
- Functional status: independent in ambulation without assistive devices and independent in ADLs. Living alone in a one-story home
- Recommendation: Brain MRI which demonstrated an incidental, large right front-parieto-temporal cyst with significant mass effect
- Physical/Occupational therapy: balance, mobility, and assistive devices

## Neurosurgery Consult

- No evidence of increased intracranial pressure
- Family decided no surgical intervention



## Imaging



A – T2 Axial Flair, B – T2 Sagittal Flair, C – ADC, D – Restricted Diffusion

## Follow Up

Patient was found with depression, anorexia, and urinary retention. Family denies any headaches or further mental deterioration. Patient currently requires assistance in ADLs and is walking less.

## Discussion

- Arachnoid cysts comprise 1% of all intracranial space-occupying lesions with an increasing incidence of asymptomatic type as more patients undergo neuroimaging procedures for unrelated symptoms.
- Signs and symptoms vary according to cyst size and location. Typical symptoms include headache, nausea, vomiting, mental status changes, seizures, hearing and visual disturbances, vertigo, and ataxia.
- If left untreated, permanent severe neurological damage may occur with progressive expansion of the cyst.
- Improvement in recognizing subtle changes in history and physical exam may provide earlier detection of small-sized cysts prior to incidental finding of larger cystic lesions.
- This patient was diagnosed with major neurocognitive disorder four months prior to admission.

## Conclusion

Identifying subtle symptoms like ataxia, cognitive and behavioral changes that may go easily unnoticed or disregarded may lead to timely intervention and potentially improve outcomes.

## References

- Mustansir, F., Bashir, S., & Darbar, A. (2018). Management of Arachnoid Cysts: A Comprehensive Review. *Cureus*, 10(4), e2458. <https://doi.org/10.7759/cureus.2458>
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