



Interdisciplinary Medicine: Providing Safety Nets For Patients And Drastically Changing Outcomes

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INTRODUCTION

An interdisciplinary team in medicine is defined as a group of health care professional from diverse fields who work in a coordinated fashion toward a common goal for the patient. Goals of these teams aim to maximize patient safety, limit adverse events, decrease the LOS, and increase the quality of outcomes.

INITIAL PRESENTATION

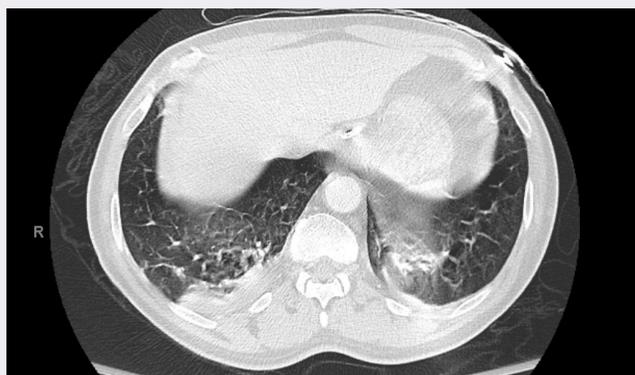
Case: A 67 y/o male with no known PMH presented with progressive shortness of breath. Over the past 3-4 days had weakness, malaise and increasing shortness of breath.

Vitals: Temp: 37.5, BP: 203/93, HR: 91, RR: 26, SaO2: 80% on 15L facemask.

Labs:

16.0	140	104	16	Ca	-- 9.6	AST	-- 16
9.3	269	204		Mg	--	ALT	-- 24
48.5	3.9	30	1.17	Phos	--	TBili	-- 0.9
						AlkP	-- 106
						gGTP	--
03/27 17:13	03/27 17:13	03/27 17:13	03/27 17:13				03/27 17:13

Imaging: CT Chest revealed infiltrates greatest in right lower lobe and bilateral dependent densities (below).



Further workup: COVID negative. Troponin negative. Lactic acid 2.5.

ICU Course: Work-up revealed pneumococcal pneumonia, treated with a course of ceftriaxone. Required short course of vasopressors for presumed septic shock in the setting of PNA. Successfully extubated 4 days after admission and transferred out of the ICU.

HOSPITAL COURSE

3/27/20

- Presented to ED by EMS under COVID precautions.
- Intubated due to hypoxia.
- COVID tested.
- Treated for pneumococcal PNA.

4/1/20

- Extubated.
- Speech therapy: severe neurologic appearing bulbar dysphagia, requesting modified barium swallow.
- Transferred to floor overnight.

4/2/20

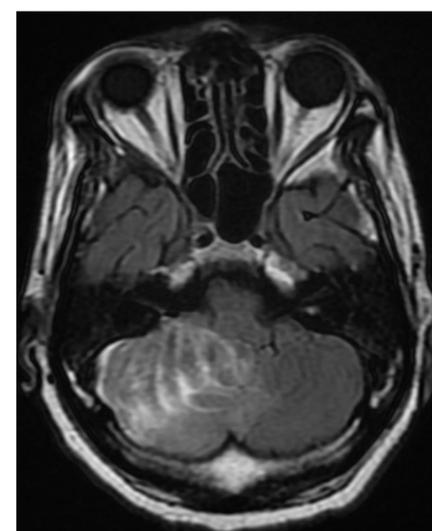
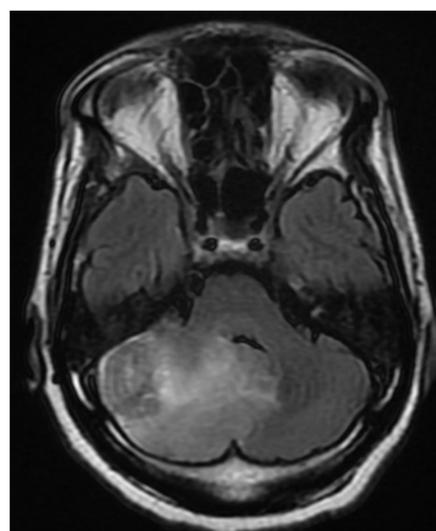
- MBS: severe dysphagia characterized by patterns of neuromuscular weakness.
- Physical therapy: flattened affect, slow, shuffled gait with increased right foot-drag.
- Exam: hypophonia, difficulty clearing secretions, loss of right nasal labial fold and left sided neglect.
- MRI: Shown below. CTA head/neck: occlusion of the right vertebral artery.
- Stroke team alerted: Not a candidate for tPA or IA therapy.

4/3/20-4/6/20

- Further work-up revealed: New onset DMII with A1c 7.8%, vitamin D deficiency, and slightly elevated TSH.
- TTE showed LVEF 55-60%, but the study was limited.
- CTA chest was obtained and showed no intracardiac thrombi or mass.

4/7/20

- Admitted to inpatient rehabilitation.



Above: T2 Flair showing Subacute right PICA territory infarct with hemorrhagic conversion and left frontal/bilateral parietal infarcts

OUTCOME

- Initially slated for a skilled nursing facility however given the new stroke with deficits including weakness, incoordination, balance and cognitive impairment, dysarthria, dysphonia and dysphagia he was evaluated and accepted by inpatient rehabilitation.
- Patient was subsequently discharged home completely independent with his ADLs.
- Persistent hypophonia followed outpatient by PCP and ENT.

DISCUSSION

- Due to interdisciplinary team input, a straightforward case of aspiration PNA and hypoxic respiratory failure status post intubation was challenged and proved to likely be an initial PICA stroke which likely lead to aspiration due to significant bulbar dysfunction and subsequently respiratory failure.
- Difficult diagnosis to make in an intubated patient.
- Complicated care in the time of COVID-19, attempts at limiting exposure could have contributed to care and physical exams being compromised.
- Multidisciplinary in-hospital teams improve patient outcomes: A review by Nancy E. Epstein published in Surgical Neurology International in 2014 reports the critical need to keep multidisciplinary teams together.
- This case demonstrates the power of interdisciplinary medicine and its ability to impact clinical diagnosis as well as outcomes.

REFERENCES

Epstein NE. Multidisciplinary in-hospital teams improve patient outcomes: A review. Surg Neurol Int 2014; 5: S295-303.