

Subacute Combined Degeneration in Atypical Case

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Background

- Subacute Combined Degeneration (SCD) is a generally rare pathology of myelination secondary to vitamin B12 deficiency.
- Due to association with vitamin B12, a vitamin regularly found in most average diets, it is usually associated with patients with chronic illness, gastrointestinal tract irregularities, nutrition deficits, strict diets, or elderly patients.
- This case is atypical in that it is in a younger patient without apparent risk factors
- Management of SCD is generally straightforward yet when unrecognized and untreated can lead to severe debilitating morbidity.
- For atypical patients there may be unnecessary delay in diagnosis which can lead to advancement of pathology.

Objective

The purpose of this case report is to present an atypical case of SCD to aid Clinicians in further recognizing the diverse presentation possibilities of SCD

Case Description

- 43-year-old male with no significant past medical history with new onset weakness in arms he has been most aware of for past 6 weeks.
- Patient reports a prior workup was done and was negative.
- Worsening weakness in lower extremities of three days with difficulty ambulating
- No prior similar episode

Neurologic Exam

CNs intact
Reduced grip strength
Dysmetria
Dysidiadochokinesia
Sensation reduced in posterior legs
Proprioception reduced in toes

Physical Exam

HEENT: WNL
Cardiac: WNL
-Pulm: WNL
Abdomen: WNL
Skin: Hyperpigmented lesions to flank

Pertinent history

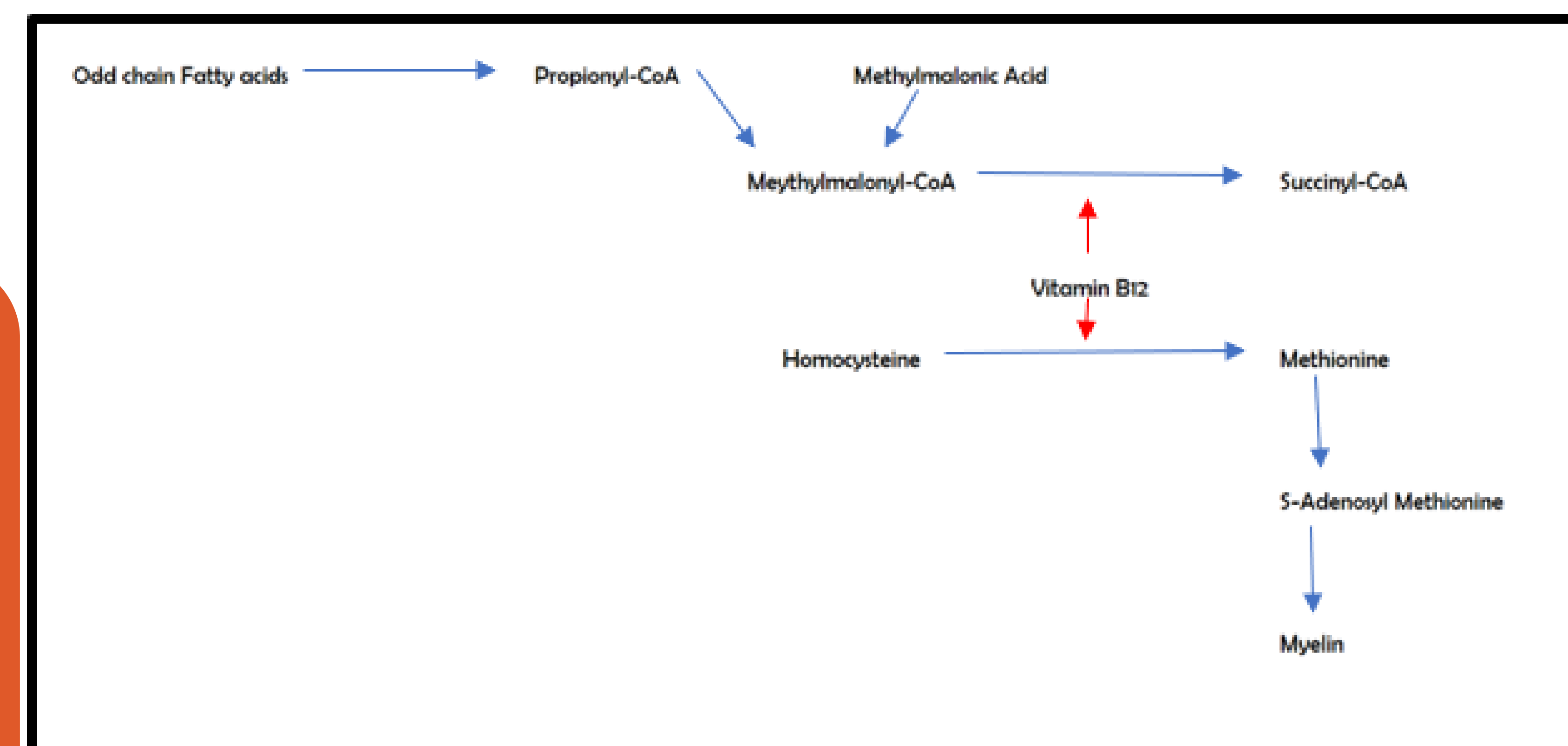
- > No special diet
- > No history of gastric surgery
- > No known infectious disease
- > Unclear chronicity

Results

Chart title			
	Result	Reference value	
Homocysteine	18.4	0.0-14.5 µmol/L	
B12	<159	>400 pg/m:	
Hgb	8.7	13.5-17.5 g/dL	
Platelets	119	150,000-450,000/mcL	
MCV	103	80-100 fL	
Leukocytes	2.9	4.5-11 x10 ⁹ /mm ³	



• Patient's Imaging with classic "Inverted V sign"



• *Chart information from 1,2

Discussion

- Clinical manifestations include hyperpigmentation, glossitis, anemia, leukopenia, pancytopenia,, gait abnormalities, loss of proprioception/vibratory sense, peripheral neuropathy, and more (4)
- Management is vitamin replacement which can be done enterally or parenterally
 - o IV B12 is preferred when symptomatic,, longer term management can include parenteral or oral with some studies suggesting oral as acceptable even in setting of malabsorption .
- Neurologic symptoms may take many months to improve (4)
- Further workup include pursuing pernicious anemia based on clinical suspicion
- Inverted V sign is a classic radiologic finding associated with select conditions including SCD, multiple sclerosis, and acute transverse myelitis . (3)
- In this case patient did not have contrast enhancement on imaging or history particularly consistent with multiple sclerosis. Likewise, exam and history unlikely for transverse myelitis. IgG/Albumin index normal.
- Patients generally have good prognosis when treated, but long-term debility can occur (5)

Conclusion

- Patient reported and showed continued improvement of strength following Vitamin b12 therapy
- Patient likely continued to show improvement with outpatient continued medical supplementation and physical rehabilitation
- While atypical in presentation, low B12 on labs, imaging consistent with SCD, and gradual improvement following B12 replacement suggest SCD as the underlying cause of patient's weakness
- Despite not being the typical patient SCD would be suspected in, prompt testing allowed for recognition and treatment

References

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