



Clinical Case Presentation

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Reason for Admission



67-year-old male with:

November 2021

- Lower extremity edema for the past 4 months

Case : PMH-Meds



Past History:

- Dyslipidemia
- Active smoker
- Serum Creatinine: 1mg/dl (eGFR: 84 ml/min/1.73m²)
- BMI : 25 kg/m²

Medications:

- Ezetimibe/Atorvastatin (10/20 mg)

Initial blood tests

- Hb: 15 mg/dl
- BUN: 30 mg/dl
- **sCr: 1.6 mg/dl (eGFR=44ml/min/1.73m²)**
- sAlbumin: 2.6 g/dl
- Urine sediment: negative
- **Proteinuria: 10.3 gr/24H**

Kidney biopsy

- **Light microscopy:**

- 26 glomeruli

- 19% (5/26) global sclerosis

- Global thickening of glomerular basement membrane

- 35% interstitial fibrosis

- **Immunohistochemical staining:**

- C4d (+) / IgG4(-) / PLA2R(+)

- **Immunofluorescence:**

- IgG (3+) / C3 (3+) / C1q (2+) / C4 (2+) / λ - light chains (3+) / κ - light chains (3+)

Final Diagnosis: Membranous Nephropathy (Stage III Churg – Ehrenreich)

Primary PLA2R (+) MN - Treatment

High risk of progression

- On RASi (ACEi)/SGLT2i (3 mo)
- **eGFR: 44ml/min/1.73m²**
- **Proteinuria: 10gr/24H**
- **PLA2R: 57 IU/ml**

Evaluation for secondary causes (laboratory, imaging, diagnostic studies) : negative

January 2022

Cyclophosphamide+ GCs

“Ponticelli” regimen:

- During months 1, 3, and 5, (IV) methylprednisolone (1 g/day for three days), followed by oral prednisolone (0.5 mg/kg per day for 28 days).
- During months 2, 4, and 6, oral cyclophosphamide (2 mg/kg per day)

Primary PLA2R (+) MN – Post Treatment

Post treatment 6 (mo)



Complete remission

- sCr: 1.2mg/dl (eGFR=62ml/min/1.73m²) (improvement)
- sAlbumin: 3.7g/dl
- 24h urine collection: 300mg/ 24H
- AntiPLA2R: 4.5 U/ml (negative)

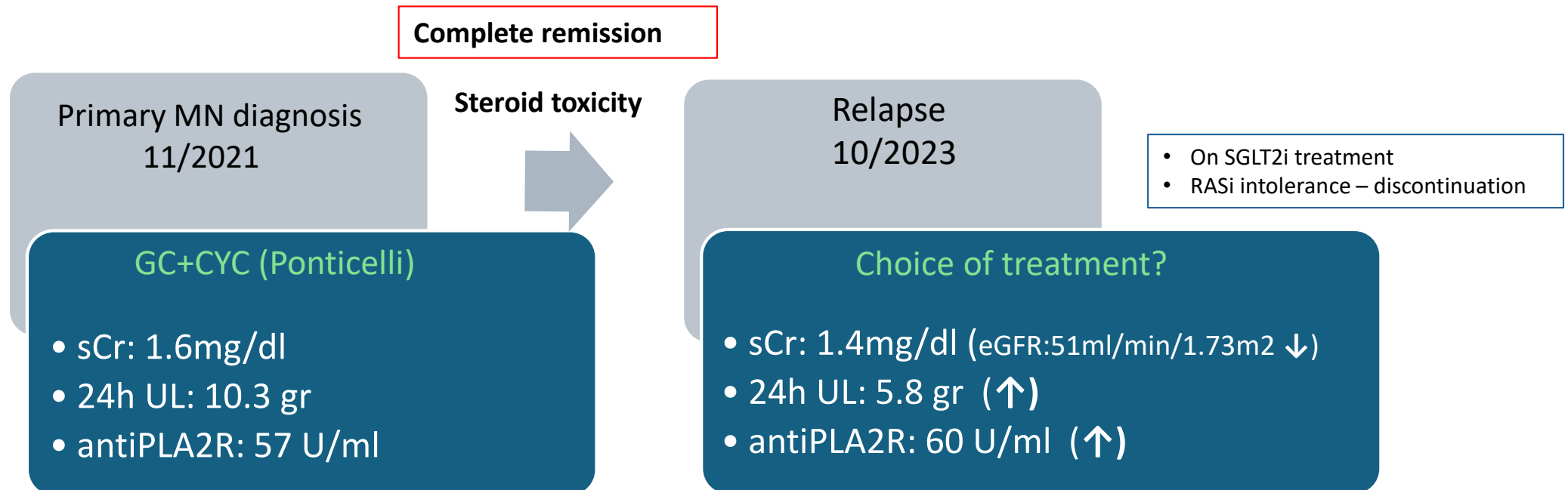


Steroid toxicity

- ↑ Weight
- Osteoporosis

(1). Discussion - Relapse after remission in MN

- What should be the immunosuppressive treatment?

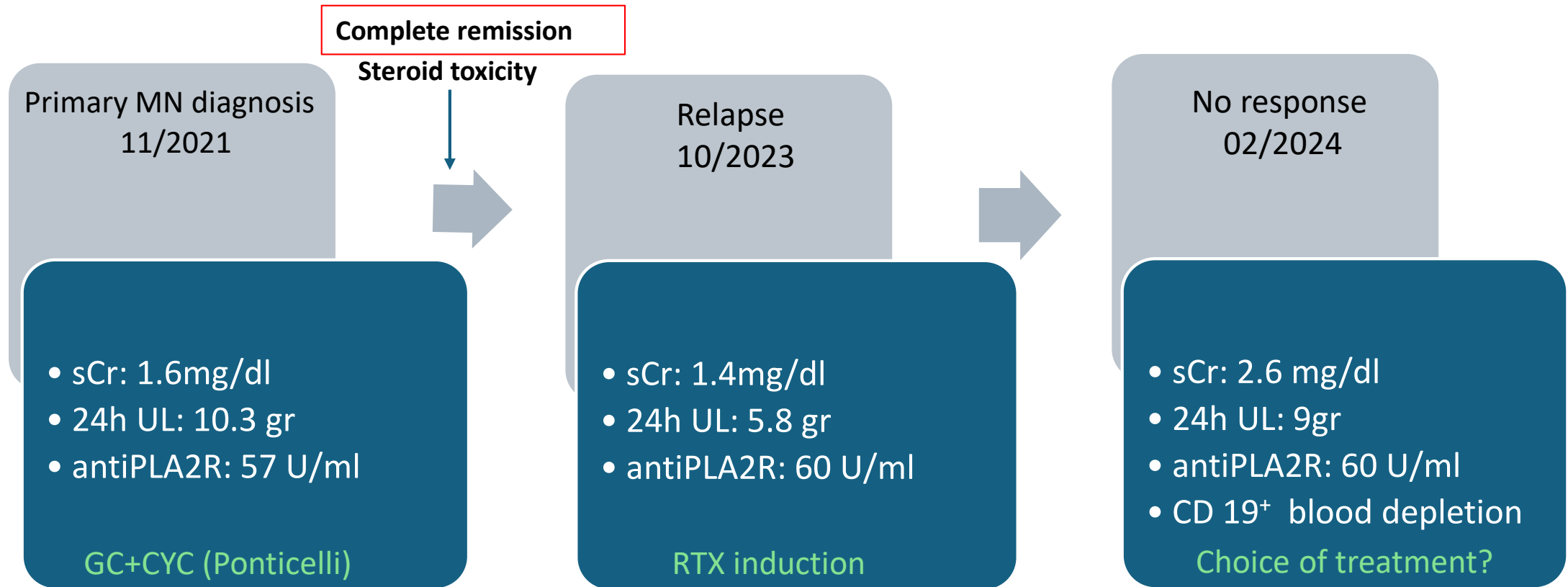


Treatment of Relapse

November 2023

Rituximab 1gr initially followed 14 days later by another 1 g dose

Summary of the case



(2). Discussion-Further management

What should be the next management step?

1. Continuation with RTX 2gr at 6 months
2. Addition of calcineurin inhibitor
3. Addition of CYC+GC (ponticelli regimen)
4. Addition of other B-cell depleting ab (Obinutuzumab)
5. Addition of plasma-cell directed therapies (Bortezomib)

Further management

Obinutuzumab initiation (April 2024)

Labs 1st mo (May 2024)

- sCr: 1.5 mg/dl (↓)
- sAlb: 2.7 g/dl (↑)
- 24h urine collection: 8.7gr/24H (↓)
- No side/effects or infections

Acknowledgments

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Pathologist:

Harikleia Gakiopoulou



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Final Points