

A DANGEROUS DIAMINODIPHENYL DIFFERENTIAL

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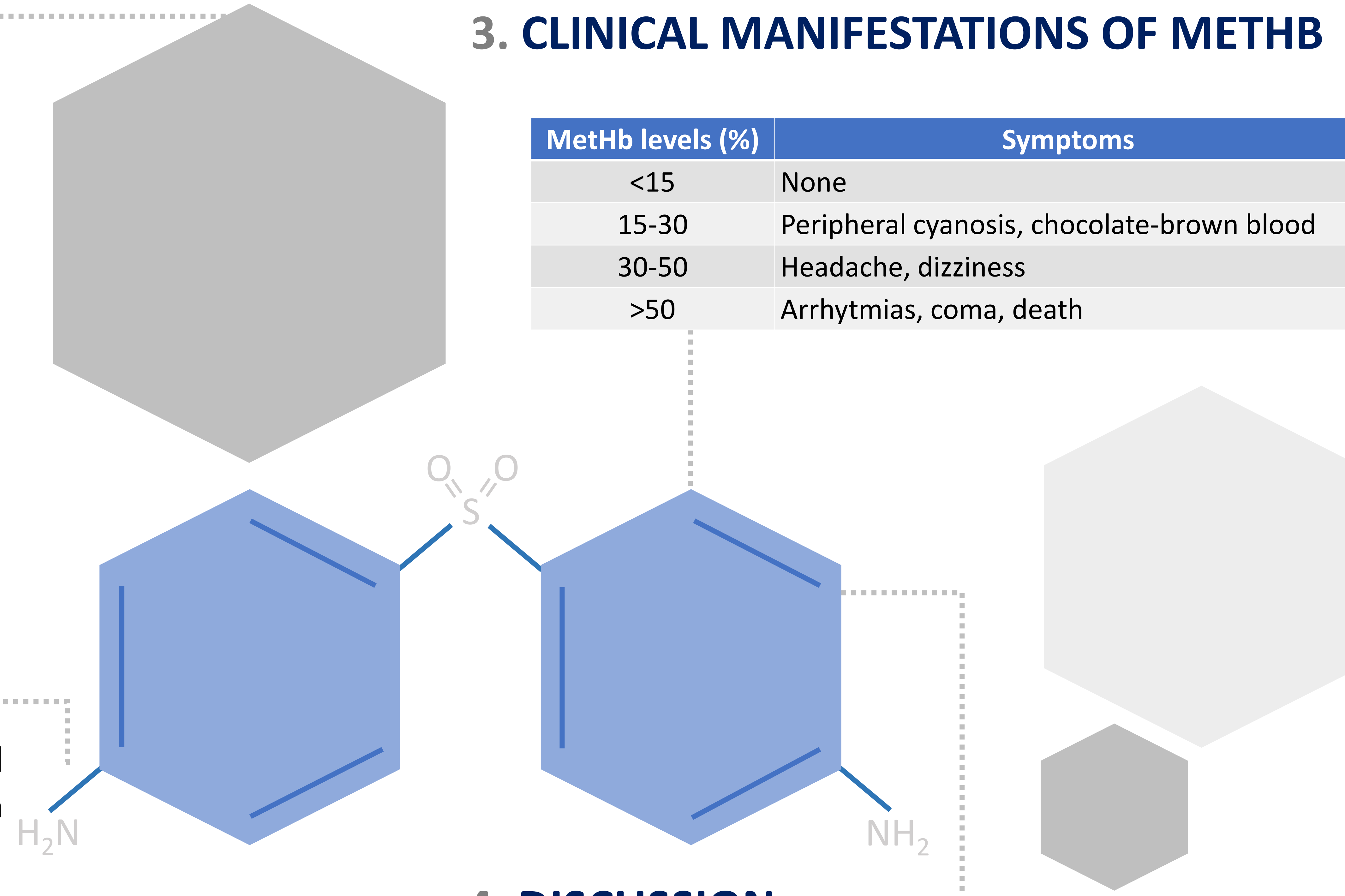
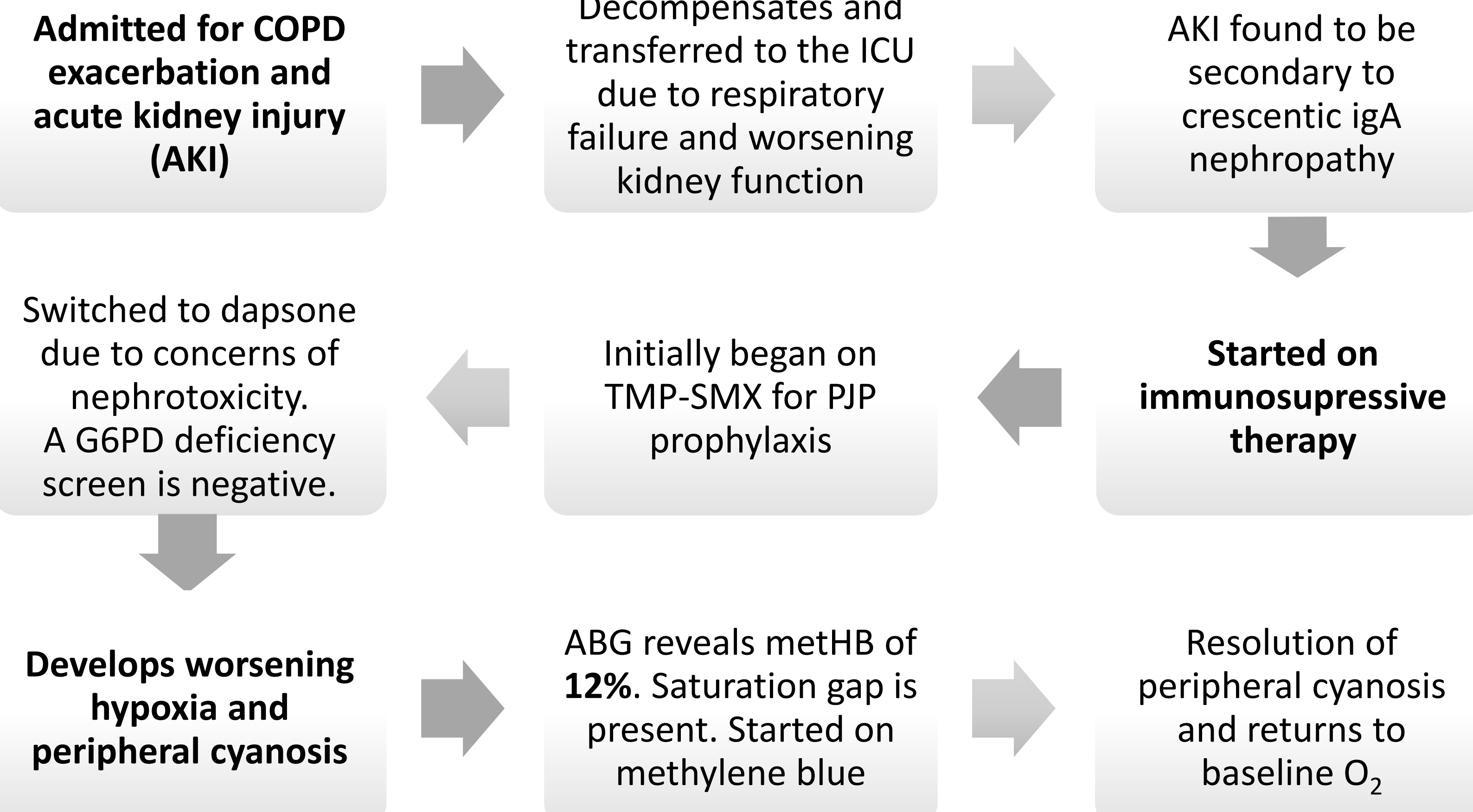
1. INTRODUCTION

Dapsone, a sulfone antibiotic, is used for *Pneumocystis jirovecii* pneumonia (PJP) prophylaxis in patients who cannot tolerate trimethoprim-sulfamethoxazole (TMP-SMX). Dapsone-induced methemoglobinemia (metHB) is a rare and potentially life-threatening adverse effect. Our case illustrates the importance of identifying methemoglobinemia as a differential in patients recently treated with immunosuppressives and PJP prophylaxis who have persistent hypoxia and peripheral cyanosis.

2. CASE DESCRIPTION

77-year-old female with a PMH of COPD and rheumatoid arthritis, who presented with worsening shortness of breath.

Patient Hospital Course



3. CLINICAL MANIFESTATIONS OF METHB

MetHb levels (%)	Symptoms
<15	None
15-30	Peripheral cyanosis, chocolate-brown blood
30-50	Headache, dizziness
>50	Arrhythmias, coma, death

4. DISCUSSION

- Methemoglobinemia is based on clinical symptoms according to serum metHb levels. Symptoms may arise even at lower levels like with our patient (see Table above).
- Helpful to the diagnosis is the classic oxygen “saturation gap”, i.e. discordance between arterial blood gas analysis (paO₂) and pulse oximetry readings (peripheral O₂ sat).
- Clinical symptoms and severity depend on the serum metHb present and, at high levels (>50%), can cause arrhythmias, coma and death.
- Removing the inciting agent alongside the use of IV methylene blue is the mainstay therapy.

5. TAKE HOME POINTS

- Dapsone is contraindicated in patients with G6PD deficiency, therefore screening is important prior to starting dapsone.
- Methemoglobinemia can occur even with a negative G6PD deficiency screen and with therapeutic doses.
- Removal of the inciting agent and IV methylene blue is the mainstay of therapy. There is paucity of data for incidence of dapsone-induced methemoglobinemia but is estimated at 3% for transplant recipients on dapsone for PJP prophylaxis.
- A review of medications should be performed to evaluate for methemoglobinemia despite an initial negative screen of G6PD deficiency in similar clinical scenarios.

6. REFERENCES

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