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Case Series

Mycoplasma pneumoniae–Associated Reactive Infectious Mucocutaneous Eruption: A Case Series

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Conflict of interest: Nil

Abstract

Background: Reactive Infectious Mucocutaneous Eruption (RIME) is a recently recognized infection-associated mucocutaneous syndrome characterized by severe mucositis with minimal or absent cutaneous involvement. Mycoplasma pneumoniae is the most frequently implicated pathogen. RIME is increasingly distinguished from Stevens–Johnson syndrome (SJS) due to differences in etiology, management, and prognosis.

Case Series: We report a retrospective case series of three young adults presenting with prominent oral, ocular, and/or genital mucositis following febrile respiratory illness. All patients were admitted to General ward in department of General Medicine, GMERS Medical College and Hospital, Vadodara, Gujarat, India, and had laboratory-confirmed Mycoplasma pneumoniae infection by polymerase chain reaction and/or serology. None had a history of recent drug exposure. Clinical features, laboratory parameters, radiological findings, treatment, and outcomes were analyzed.

Conclusion: This case series highlights the importance of recognizing Mycoplasma pneumoniae–associated RIME as a distinct clinical entity. Early diagnosis can prevent misclassification as drug-induced SJS, avoid unnecessary lifelong drug avoidance labelling, and guide appropriate supportive and antimicrobial management.

Keywords: Reactive Infectious Mucocutaneous Eruption; Mycoplasma Pneumoniae; Mucositis; Stevens–Johnson Syndrome; Atypical Pneumonia.

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Introduction

Reactive Infectious Mucocutaneous Eruption (RIME) is an infection-triggered immune-mediated syndrome characterized by prominent mucositis involving two or more mucosal sites, with sparse or absent skin involvement [1].

Mycoplasma pneumoniae is the most commonly associated pathogen, although other infectious triggers have been reported. RIME has emerged as a distinct entity separate from Stevens–Johnson syndrome (SJS) and erythema multiforme, which are primarily drug-induced and associated with extensive epidermal necrosis [8]. Differentiating RIME from these conditions is clinically important due to differences in etiology, prognosis, recurrence risk, and long-term patient counselling [2].

Methods

This retrospective observational case series was conducted at the General ward in department of General Medicine, GMERS medical college and hospital, vadodara, Gujarat, India.

Medical records of patients admitted between 1st April 2025 to 31th April, 2025 were reviewed. Inclusion criteria were:

1. Presence of mucositis involving two or more mucosal sites
2. Minimal or absent cutaneous involvement
3. History of recent febrile respiratory illness
4. Laboratory confirmation of Mycoplasma pneumoniae infection by respiratory multiplex PCR and/or serology

Patients with recent exposure to high-risk medications known to cause SJS/TEN were excluded. Data collected included demographic details, clinical presentation, laboratory investigations, imaging findings, treatment modalities, and clinical outcomes. Written informed consent was obtained from all patients.

Institutional ethical approval was waived due to the retrospective nature of the study.

Case Series

Case 1

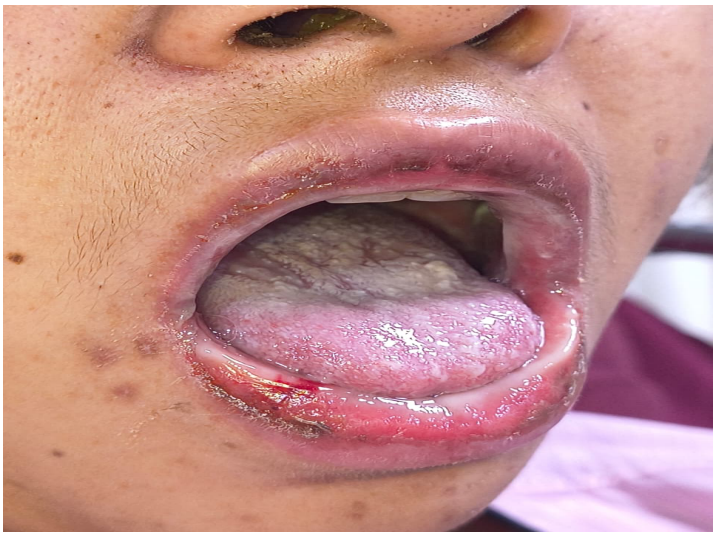

Figure 1:

A 22-year-old female presented with a history of high-grade fever for 15 days and cough for 5–6 days, followed by acute onset of severe painful oral ulceration, hemorrhagic crusting of lips, and conjunctival redness with watering of eyes, and difficulty in swallowing even saliva. There was no history of recent drug intake prior to symptom onset.

On examination, she had extensive erosive oral mucositis with hemorrhagic crusts over upper and lower lips, bilateral conjunctivitis, and minimal cutaneous involvement. Systemic examination revealed bilateral coarse crepitations on respiratory examination. Laboratory investigations showed elevated inflammatory markers (CRP 24 mg/L, ESR 50 mm/hr), leukocytosis (WBC 12,050/mm³), and mild anemia (Hb 10.9 g/dL). Respiratory multiplex PCR and Serology revealed positive Mycoplasma pneumoniae IgM and IgG antibodies, while tests for leptospira, dengue, HIV, and viral hepatitis were negative. HRCT thorax demonstrated bilateral patchy ground-glass opacities involving superior and lateral basal segments of both lower lobes with few subcentimetric mediastinal lymph nodes. The patient was diagnosed with Mycoplasma pneumoniae pneumonia with RIME. She was treated with azithromycin and doxycycline, along with supportive care including intravenous fluids, analgesics, topical oral care, ophthalmology consultation, and nutritional support. Significant clinical improvement was noted over 10–12 days, and she was discharged in stable condition.

Case 2

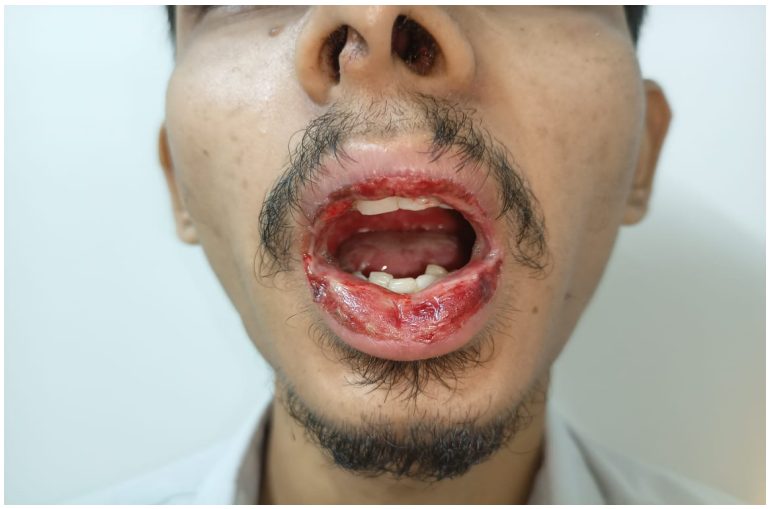

Figure 2:

A 19-year-old male presented with a 10-day history of fever and dry cough followed by painful oral erosions, hemorrhagic crusting of lips, bilateral conjunctivitis, and dysphagia. There was no preceding history of new drug intake. Cutaneous examination revealed no significant skin rash. On admission, the patient was febrile and dehydrated. Oral examination showed extensive erosive stomatitis involving buccal mucosa, tongue, and lips.

Ophthalmologic examination confirmed bilateral conjunctivitis without corneal involvement. Chest examination revealed bilateral basal crepitations. Laboratory investigations showed leukocytosis (WBC 13,200/mm³), elevated CRP (28 mg/L), and ESR (56 mm/hr). Respiratory multiplex PCR was positive for Mycoplasma pneumoniae. Serology showed positive Mycoplasma pneumoniae IgM antibodies. Other infectious workup including dengue, leptospira, HSV, and HIV was negative. HRCT thorax demonstrated bilateral patchy ground-glass opacities predominantly involving lower lobes.A diagnosis of Mycoplasma pneumoniae–associated RIME was made.

The patient was treated with azithromycin along with supportive therapy including intravenous fluids, topical oral anesthetic gels, ophthalmic lubricants, and nutritional support. Gradual improvement was observed, with resolution of mucositis over two weeks. The patient was discharged in stable condition.

Case 3

Figure 3:

A 27-year-old male presented with fever and upper respiratory tract symptoms for one week, followed by acute onset painful oral ulcers, lip swelling with crusting, conjunctival redness, and genital mucosal erosions. She denied intake of any new medications prior to symptom onset.

Clinical examination revealed severe mucositis involving oral and genital mucosa with bilateral conjunctivitis. Skin involvement was minimal, limited to a few erythematous macules over the trunk. Respiratory examination revealed scattered crepitations. Investigations showed raised inflammatory markers (CRP 32 mg/L), leukocytosis, and mild transaminitis. Respiratory panel PCR detected Mycoplasma pneumoniae. Serology was positive for Mycoplasma pneumoniae IgM. Chest imaging revealed bilateral interstitial infiltrates. Other causes of mucocutaneous eruptions including herpes simplex virus, hepatitis viruses, and autoimmune markers were ruled out. She was diagnosed with Mycoplasma pneumoniae–associated RIME and managed with doxycycline, supportive care, ophthalmology and gynecology consultations.

Systemic corticosteroids were not required. Marked clinical improvement was noted within 10 days, and she was discharged with complete resolution of mucosal lesions on follow-up.

Table 1: Clinical Characteristics of Patients with Mycoplasma pneumoniae–Associated RIME

Parameter	Case 1	Case 2	Case 3
Age/Sex	22/F	19/M	27/M
Respiratory prodrome	Yes	Yes	Yes
Oral mucositis	Yes	Yes	Yes
Ocular involvement	Yes	Yes	Yes
Genital involvement	No	No	Yes
Skin involvement	Minimal	Absent	Minimal
PCR/Serology positive	Yes	Yes	Yes
Antibiotic used	Azithro + Doxy	Azithro	Doxy
Steroids used	No	No	No
Outcome	Recovered	Recovered	Recovered

Discussion

RIME represents a post-infectious immune-mediated mucocutaneous response, most commonly following Mycoplasma pneumoniae infection. Unlike Stevens–Johnson syndrome, RIME is not primarily drug-induced and typically has limited skin involvement with predominant mucositis [3]. The pathogenesis is thought to involve immune complex deposition and molecular mimicry triggered by infectious antigens [4]. Clinically, patients present with severe oral, ocular, and sometimes genital mucositis, often preceded by respiratory symptoms. Our cases highlight the importance of considering RIME in patients with severe mucositis following respiratory infection, especially when Mycoplasma pneumoniae testing is positive [5]. Early diagnosis helps prevent misdiagnosis as SJS, avoiding unnecessary lifelong drug avoidance labels. Management remains largely supportive, with treatment of the underlying infection [6]. Macrolides or doxycycline are commonly used for Mycoplasma pneumoniae. The role of systemic corticosteroids or immunomodulators remains controversial and should be individualized [7].

Clinical Implications: Early recognition of RIME allows appropriate antimicrobial therapy, avoids unnecessary immunosuppression, and improves patient outcomes. Clinicians should maintain a high index of suspicion in patients presenting with severe mucositis following respiratory infection in the absence of drug exposure.

Conclusion

Mycoplasma pneumoniae–associated RIME is an under recognized but clinically important entity. Accurate diagnosis and awareness can prevent misclassification as Stevens–Johnson syndrome and ensure optimal management with excellent prognosis.

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References

1. Ramien ML, Pope E. Reactive infectious mucocutaneous eruption: Mycoplasma pneumoniae–induced rash and mucositis revisited. J Am Acad Dermatol. 2018;79(2):395–399.
2. Canavan TN, Mathes EF, Frieden I, Shinkai K. Mycoplasma pneumoniae–induced rash and mucositis as a syndrome distinct from Stevens–Johnson syndrome: A systematic review. J Am Acad Dermatol. 2015;72(2):239–245.
3. Meyer Sauteur PM, Unger WWJ, Nadal D, Berger C, Vink C, van Rossum AMC. Infection with and carriage of Mycoplasma pneumoniae in children. Front Microbiol. 2016;7:329.
4. Shah PR, et al. Reactive infectious mucocutaneous eruption (RIME): An emerging entity. Clin Exp Dermatol. 2021;46(6):1094–1099.
5. Olson D, Watkins LK, Demers DM, et al. Clinical features and outcomes of reactive infectious mucocutaneous eruption. Pediatr Dermatol. 2022;39(1):72–78.
6. Wetter DA, Camilleri MJ. Clinical, etiologic, and histopathologic features of Stevens–Johnson syndrome. Mayo Clin Proc. 2010;85(2):131–138.
7. Jain S, Williams DJ, Arnold SR, et al. Community-acquired pneumonia requiring hospitalization among U.S. children. N Engl J Med. 2015;372:835–845.
8. Meyer Sauteur PM, et al. Mycoplasma pneumoniae and mucocutaneous disease: What is new? J Eur Acad Dermatol Venereol. 2020; 34(4):664–673.