**Scholars Journal of Medical Case Reports**
Abbreviated Key Title: Sch J Med Case Rep
ISSN 2347-9507 (Print) | ISSN 2347-6559 (Online)
Journal homepage: https://saspublishers.com

OPEN ACCESS

Surgery

# Mycoplasma Pneumoniae-Associated Mucositis with Oral and Ocular Involvement in an Immunocompetent Adult: A Case Report

Ahlam Hmimsa[1*], Nabil Touihem[1], Hicham Attifi[1], Ali Boukhari[1], Mounir Hmidi[1]

[1]Department of ENT and Head and Neck Surgery, Military Hospital Moulay Ismail. Meknes, Morocco

**DOI:** https://doi.org/10.36347/sjmcr.2025.v13i06.030 | **Received:** 07.05.2025 | **Accepted:** 13.06.2025 | **Published:** 17.06.2025

***Corresponding author:** Ahlam Hmimsa
Department of ENT and Head and Neck Surgery, Military Hospital Moulay Ismail. Meknes, Morocco

**Abstract** | **Case Report**

Mycoplasma pneumoniae is a bacterial organism commonly responsible for atypical pneumonia. Beyond its respiratory manifestations, M. pneumoniae can cause a range of extrapulmonary symptoms, including mucocutaneous lesions. One rare but notable condition is M. pneumoniae-associated mucositis (MPAM), characterized by prominent mucosal inflammation (e.g., ocular, oral, and urogenital) with minimal or absent cutaneous lesions. Diagnosis is confirmed via PCR or serology for M. pneumoniae. Treatment involves macrolide antibiotics and supportive care, with corticosteroids considered in severe cases. Early recognition of MPAM is critical to avoid unnecessary investigations and to guide appropriate therapy. We report a case of a healthy 30-years-old male presenting with severe oral and ocular lesions in the absence of significant pulmonary symptoms, and with strongly positive M. pneumoniae PCR results. The patient was treated with antimicrobial therapy and had an uneventful recovery.

**Keywords**: Mycoplasma pneumonia, Mucositis, PCR, Case report.



## INTRODUCTION

Mycoplasma pneumoniae is a common cause of atypical pneumonia, particularly in children and young adults [1]. Beyond its respiratory manifestations, M. pneumoniae can cause a range of extrapulmonary symptoms, including mucocutaneous lesions. One rare but notable condition is M. pneumoniae-associated mucositis (MPAM), characterized by prominent mucosal inflammation typically affecting the oral, ocular, and urogenital sites, with minimal or absent cutaneous lesions [2]. Previously considered a variant of Stevens-Johnson Syndrome (SJS), is now increasingly recognized as a distinct clinical entity [3]. We report a case of MPAM in a healthy adult male, notable for the absence of respiratory symptoms and a favorable response to macrolide therapy.

## CASE REPORT

A 30-years-old male patient, with no significant past medical history presented with bilateral conjunctivitis and painful oral lesions that had evolved over several days, accompanied by progressive dysphagia to solids. The patient denied any respiratory symptoms, such as cough or dyspnea. There was no recent use of medications, nor any history suggestive of sexually transmitted infections or recent travel.

On physical examination at the time of admission, severe oral mucositis was observed, with swollen, crusted, erythematous and ulcerated lips, along with a purulent exudate, multiple ulcerative lesions in the buccal mucosa, and difficulty opening the mouth due to pain (figure 1). An eye examination revealed bilateral conjunctival injection with crusting of the eyelids and purulent discharge, (figure 2). No skin rash, or genital lesions or lymphadenopathy were noted. Systemic and chest examinations were normal. Chest X-ray was normal

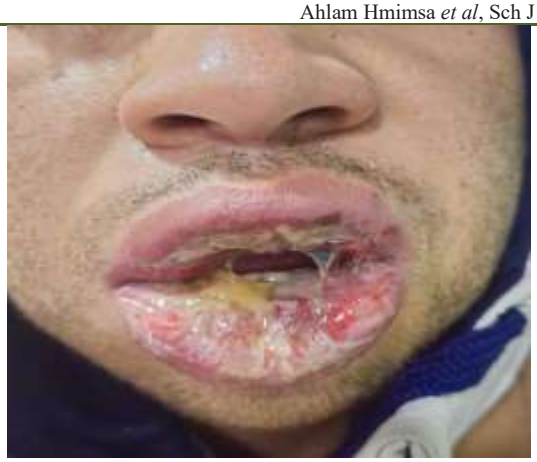


**Figure 1: Erythematous and ulcerated lips, with a purulent exudate**

**Figure 2: bilateral eyelid crusting and purulent discharge**

Nasofibroscopy was performed due to odynophagia, revealing inflamed laryngeal mucosa with significant edema, and multiple whitish ulcerative lesions involving the supraglottic region and epiglottis. The Vocal cords appeared macroscopically normal and mobile (figure 3).

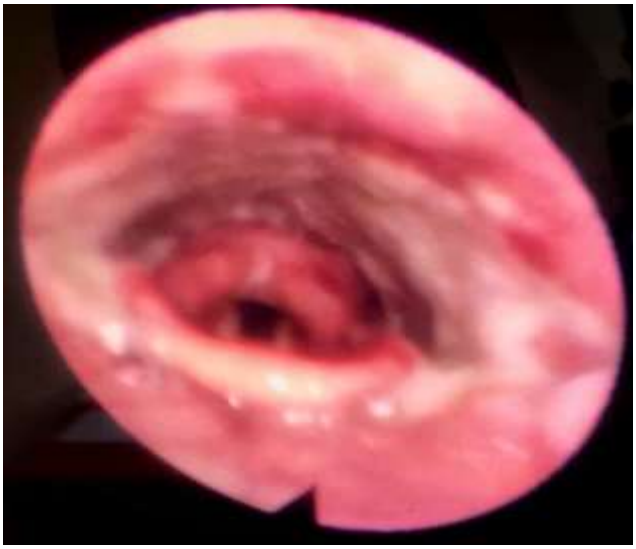
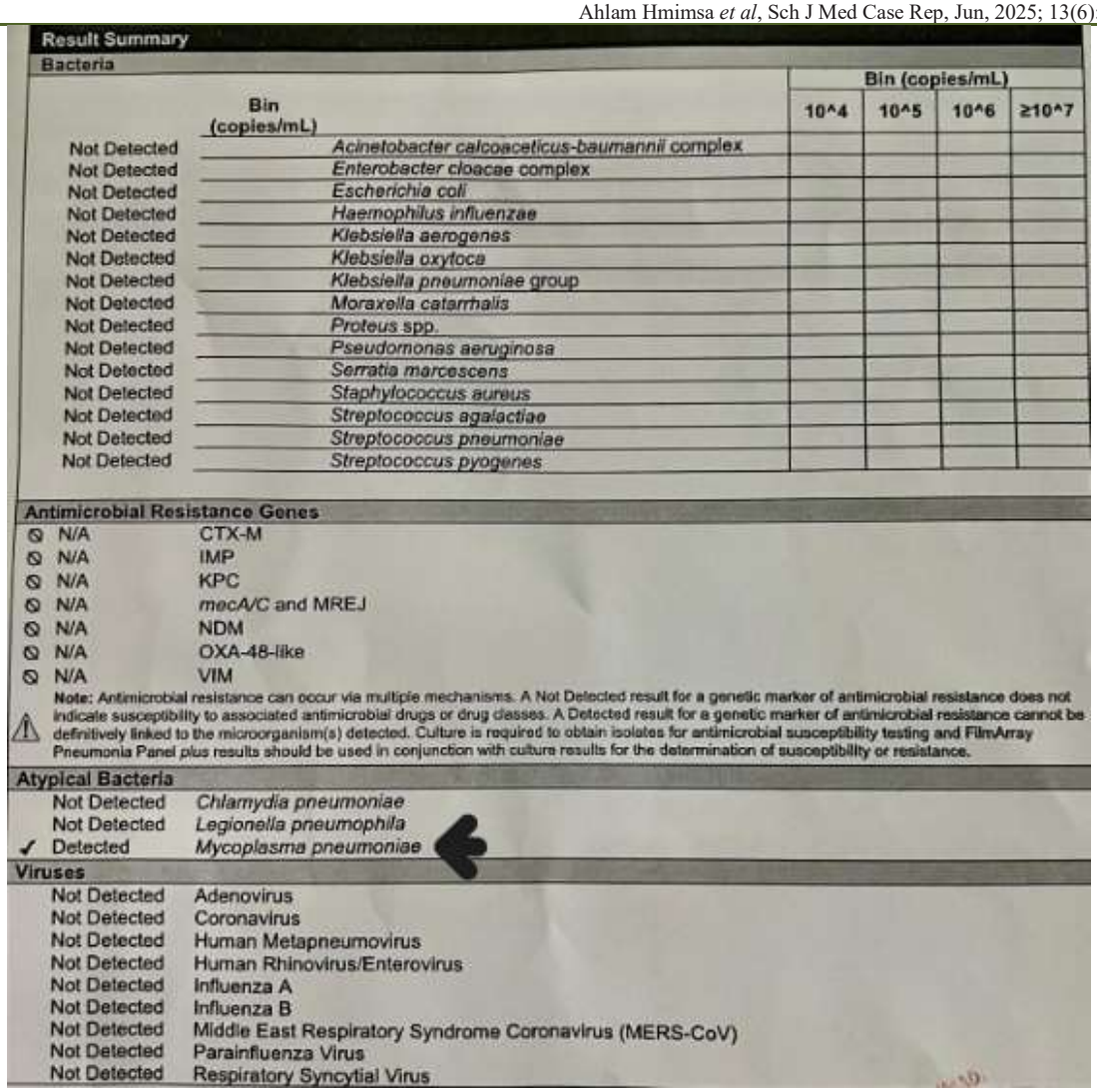


**Figure 3: Inflamed laryngeal mucosa with edema, and multiple whitish ulcerative lesions**

Laboratory tests, revealed a white blood cell count of 14.5 K/µL and negative findings for mononucleosis, with an elevated CRP of 143 mg/L. HIV serology was negative, as were tests for HSV, EBV, CMV, and syphilis. The remainder of the laboratory tests was normal, except for positive Mycoplasma pneumoniae PCR from an oropharyngeal swab (figure 4).



**Result Summary**

**Bacteria**

| Bin (copies/mL) | | Bin (copies/mL) | | | |
|---|---|---|---|---|---|
| | | 10^4 | 10^5 | 10^6 | ≥10^7 |
| Not Detected | *Acinetobacter calcoaceticus-baumannii complex* | | | | |
| Not Detected | *Enterobacter cloacae complex* | | | | |
| Not Detected | *Escherichia coli* | | | | |
| Not Detected | *Haemophilus influenzae* | | | | |
| Not Detected | *Klebsiella aerogenes* | | | | |
| Not Detected | *Klebsiella oxytoca* | | | | |
| Not Detected | *Klebsiella pneumoniae group* | | | | |
| Not Detected | *Moraxella catarrhalis* | | | | |
| Not Detected | *Proteus spp.* | | | | |
| Not Detected | *Pseudomonas aeruginosa* | | | | |
| Not Detected | *Serratia marcescens* | | | | |
| Not Detected | *Staphylococcus aureus* | | | | |
| Not Detected | *Streptococcus agalactiae* | | | | |
| Not Detected | *Streptococcus pneumoniae* | | | | |
| Not Detected | *Streptococcus pyogenes* | | | | |

**Antimicrobial Resistance Genes**

| | |
|---|---|
| N/A | CTX-M |
| N/A | IMP |
| N/A | KPC |
| N/A | *mecA/C* and MREJ |
| N/A | NDM |
| N/A | OXA-48-like |
| N/A | VIM |

**Note:** Antimicrobial resistance can occur via multiple mechanisms. A Not Detected result for a genetic marker of antimicrobial resistance does not indicate susceptibility to associated antimicrobial drugs or drug classes. A Detected result for a genetic marker of antimicrobial resistance cannot be definitively linked to the microorganism(s) detected. Culture is required to obtain isolates for antimicrobial susceptibility testing and FilmArray Pneumonia Panel plus results should be used in conjunction with culture results for the determination of susceptibility or resistance.

**Atypical Bacteria**

| | |
|---|---|
| Not Detected | *Chlamydia pneumoniae* |
| Not Detected | *Legionella pneumophila* |
| ✓ Detected | *Mycoplasma pneumoniae* |

**Viruses**

| | |
|---|---|
| Not Detected | Adenovirus |
| Not Detected | Coronavirus |
| Not Detected | Human Metapneumovirus |
| Not Detected | Human Rhinovirus/Enterovirus |
| Not Detected | Influenza A |
| Not Detected | Influenza B |
| Not Detected | Middle East Respiratory Syndrome Coronavirus (MERS-CoV) |
| Not Detected | Parainfluenza Virus |
| Not Detected | Respiratory Syncytial Virus |

**Figure 4: Positive Mycoplasma pneumoniae PCR from an oropharyngeal swab**

Empirical antibiotic therapy was initiated and later adjusted to azithromycin following the identification of Mycoplasma pneumoniae by PCR. The patient also received symptomatic treatment, including analgesics, antiseptic mouthwash, artificial tears, and eye antibiotics. The lesions began to regress within a few days (figure 5), with full resolution after two weeks.

**Figure 5: Improvement of the oral lesions after treatment (day 10)**

A control nasofibroscopy was performed on day 10 showed marked improvement, with resolution of the supraglottic edema and healing of the ulcerative lesions. The laryngeal mucosa appeared nearly normal (figure 6), and the patient reported complete resolution of odynophagia.

**Figure 6: Improvement of the laryngeal lesions, with resolution of the supraglottic edema and healing of the ulcerative lesions after treatment (day 10)**

## DISCUSSION

M. pneumoniae-associated mucositis is an underrecognized entity distinct from classical SJS and erythema multiforme (EM), with which it shares overlapping features [4]. Unlike SJS, which typically involves extensive skin detachment and is most commonly drug-induced, MPAM is characterized by isolated mucositis involving two or more mucosal sites, and minimal or no skin involvement [3,5].

The pathogenesis of MPAM is not completely understood but is thought to involve direct microbial invasion and immune-mediated mechanisms, including immune complex deposition and molecular mimicry [6]. MPAM often occurs in younger patients, with a male predominance, and can follow or coincide with respiratory symptoms, although cases without any pulmonary involvement, have been increasingly reported [7].

Diagnosis is confirmed via PCR or serology for M. pneumonia. PCR is more sensitive and specific, particularly in early disease [8]. Differential diagnosis includes viral mucositis, herpetic stomatitis, drug-induced SJS/TEN, and autoimmune blistering diseases.

Treatment involves macrolide antibiotics and supportive care, while corticosteroids may be considered in severe cases [9,10]. In situations where appropriate antibiotic and supportive therapy fail to improve the clinical course of severe MPAM, intravenous immunoglobulin (IVIG) therapy may be a valuable option [11]. To date, no vaccine has been developed or approved for the prevention of Mycoplasma pneumoniae infection [12].

## CONCLUSION

This case underscores the importance of considering MPAM in patients presenting with mucositis involving the oral and ocular mucosa, particularly when respiratory symptoms are absent or minimal. Prompt diagnosis via PCR and early initiation of macrolide therapy can lead to rapid and complete recovery. Increased awareness of MPAM among clinicians is crucial for early recognition and to avoid misdiagnosis with other mucocutaneous syndromes.

## REFERENCES

1. Atkinson, T. P., & Waites, K. B. (2014). Mycoplasma pneumoniae infections in childhood. *Pediatric Infectious Disease Journal*, *33*(1), 92–94.
2. Narita, M. (2010). Pathogenesis of extrapulmonary manifestations of Mycoplasma pneumoniae infection with special reference to pneumonia. *Journal of Infection and Chemotherapy*, *16*(3), 162–169.
3. Canavan, T. N., Mathes, E. F., Frieden, I., & Shinkai, K. (2015). Mycoplasma pneumoniae–induced rash and mucositis as a syndrome distinct from Stevens–Johnson syndrome and erythema multiforme: A systematic review. *Journal of the American Academy of Dermatology*, *72*(2), 239–245.
4. Meyer Sauteur, P. M., Goetschel, P., & Lautenschlager, S. (2012). Mycoplasma pneumoniae and mucositis – Part of the Stevens-Johnson syndrome spectrum. *Journal der Deutschen Dermatologischen Gesellschaft*, *10*(10), 740–746.
5. Schalock, P. C., & Dinulos, J. G. (2009). Mycoplasma pneumoniae–induced cutaneous disease. *International Journal of Dermatology*, *48*(7), 673–681.

6. Narita, M. (2016). Classification of extrapulmonary manifestations due to Mycoplasma pneumoniae infection on the basis of possible pathogenesis. *Frontiers in Microbiology*, *7*, 23.
7. Olson, D., Watkins, L., & Demmler-Harrison, G. (2013). Mycoplasma pneumoniae–associated mucositis and Stevens–Johnson syndrome. *Pediatric Infectious Disease Journal*, *32*(12), 1300.
8. Waites, K. B., & Talkington, D. F. (2004). Mycoplasma pneumoniae and its role as a human pathogen. *Clinical Microbiology Reviews*, *17*(4), 697–728.
9. Meyer Sauteur, P. M., *et al*. (2018). Management of Mycoplasma pneumoniae–associated mucositis in children. *Pediatric Infectious Disease Journal*, *37*(6), e157–e159.
10. Ravin, K. A., Rappaport, L. D., Zuckerbraun, N. S., Wadowsky, R. M., Wald, E. R., & Michaels, M. M. (2007). Mycoplasma pneumoniae and atypical Stevens-Johnson syndrome: A case series. *Pediatrics*, *119*(4), e1002–e1005.
11. Bressan, S., Mion, T., Andreola, B., Bisogno, G., & Da Dalt, L. (2011). Severe Mycoplasma pneumoniae-associated mucositis treated with immunoglobulins. *Acta Paediatrica*, *100*(7), e45–e47. https://doi.org/10.1111/j.1651-2227.2011.02342.x
12. Atkinson, T. P. (2021). Advances in understanding Mycoplasma pneumoniae pathogenesis and implications for vaccine development. *Human Vaccines & Immunotherapeutics*, *17*(8), 2525–2531. https://doi.org/10.1080/21645515.2021.1893068