

# Doxycycline:

## As add-on therapy in the management of pneumonia

### Pneumonia facts

- Pneumonia is the most common cause of infection-related death.<sup>1</sup>
- Etiological pathogen is identified only in 50% of the cases.<sup>2</sup>
- Pneumonia can be caused by bacteria, virus and fungi.<sup>1,3</sup>
- No single antimicrobial regimen can cover all the possible causes.<sup>1</sup>

### Treatment of pneumonia

- Initiate empirical antibiotic therapy.<sup>1</sup>
- Patients with severe pneumonia (infected with a different spectrum of etiologic agents) would benefit from different empirical antibiotic strategies.<sup>1</sup>

### Factors to consider when selecting antibiotic

- Antibiotic should target etiologic pathogens.<sup>4</sup>
- Antibiotic should be able to penetrate the site of infection.<sup>4</sup>

## Choice of antibiotic in the treatment of pneumonia

- **Doxycycline in combination with Ceftriaxone is recommended as initial empirical antibiotic therapy** for patients hospitalized with pneumonia.<sup>5</sup>
- Doxycycline is a **broad-spectrum anti-bacterial** (including atypical bacteria) and anti-viral (including corona virus).<sup>6,7</sup>
- Doxycycline has **increased tissue penetration**.<sup>8</sup>

## Therapeutic benefits of adding Doxycycline to Ceftriaxone

- Use of Doxycycline plus Ceftriaxone as initial empirical therapy significantly reduced inpatient and 30-day mortality.<sup>5</sup>

**References:** 1. Ellison RT III, Donowitz GR. Acute Pneumonia. Mandell, Douglas, and Bennett's Principles and Practice of Infectious Diseases. 2015;823-846.e5. 2. Caballero J, et al. Ann Intensive Care. 2011;1:48. 3. Heneghan C, et al. Information available at <https://www.cebm.net/covid-19/differentiating-viral-from-bacterial-pneumonia/>. As accessed on 6.7.21. 4. Torres A, et al. Nat Rev Dis Primers. 2021;7:25. 5. Flanders SA, et al. J Hosp Med. 2006;1(1):7-12. 6. Swaminathan S, et al. JAPI. 2020;68:59-63. 7. Alam MM, et al. Cureus;2020;12(6): e9658. 8. Lashinsky JN, et al. Infect Dis Ther. 2017;6:199-211.



*In acute undifferentiated fever*

**DOXT**<sup>TM</sup> *Injection*  
Doxycycline 100mg

*The one to trust*

### Abridged Prescribing Information

**Composition:** Combi-pack contains (A) Vial of Doxycycline for injection USP 100mg (B) Ampoule of Sterile water for Injection IP 10ml. **Therapeutic Indications:** Broad spectrum antibiotic for infection by Rickettsia, sexually transmitted disease, Respiratory tract infection, specific bacterial infections etc. **Dosage and Administration:** In Adults usual dosage is 200 mg on first day in one or two infusions, subsequently as per disease severity 100/200 mg daily. In Syphilis dosage can be 300 mg daily for 10 days. Infusion should be for 1-4 hours. In Paediatric patients weighing > 45kg adult dose can be used. In paediatric patients weighing < 45kg and greater than 8 years of age dose of 2.2mg/kg of body weight can be administered every 12 hours. **Contraindications:** Doxycycline is contraindicated when hypersensitivity to any of the Tetracycline's. **Drug interactions:** Anticoagulant, co-administration of Tetracyclines with penicillin, Antacid, OC pills, Antiepileptic's etc. **Warnings & Precautions:** during tooth development (last half of pregnancy, infancy and childhood to the age of 8 years) may cause permanent discoloration of the teeth (yellow-gray-brown). Evaluate for Clostridium difficile-associated diarrhoea. Limit sun exposure. Overgrowth of non-susceptible organisms, including fungi & superinfection. **Adverse reactions:** In patients receiving tetracyclines include anorexia, nausea, vomiting, diarrhoea, rash, photosensitivity, urticaria, and hemolytic anemia. **Special population:** Pregnancy Category D. Tetracyclines are excreted in human milk; Doxycycline use during nursing should be avoided if possible. Further information available upon request.  
Date: March 20, 2020



Disclaimer: This is an independent scientific work compiled and created by professional editors and validated by experts without any vested influence whatsoever. The contents are referenced from various published works and/or expert opinions. The copyright for this publication, in every which way applicable, is vested in Brinova Health Pvt. Ltd., and consequently its principals /owners as may be. Although great care has been taken in compiling and checking the information given in this publication, the author/s, purchaser/s, sponsor/s, advertiser/s shall not be responsible or in any way liable for the present and/or continued accuracy of the information or for any errors, omissions or inaccuracies in this publication whether arising from negligence or otherwise howsoever, or for any consequences arising therefrom. Opinions expressed do not necessarily reflect the views of the publisher, editor or the editorial board.