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Omadacycline: Cycling Past the Competition?

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Community acquired bacterial pneumonia (CABP), is the second most common infectious cause of hospitalization according to the U.S. Department of Health and Human Services.[1] It accounts for over 4.5 million inpatient and outpatient visits annually, and is the most common cause of infectious death.[2] Annual costs to the health care system exceed $17 billion in the United States.[2] *Streptococcus pneumoniae* and *Haemophilus influenzae* are the most common causes of CABP, and are responsible for numerous deaths every year, especially in the elderly.[2] Unfortunately, due to overuse, many of our most common agents; macrolides, cephalosporins, penicillins, and older-generation tetracyclines have become obsolete in the treatment of CABP. Thus, many clinicians have resorted to dual therapy with these agents to ensure proper coverage and relief from infection.

Like CABP, acute bacterial skin and soft skin infections (aBSSSI) also account for large healthcare costs, averaging $6,300 to $13,000 depending upon the degree of care and length of stay.[3] *Staphylococcus aureus* is of particular concern in aBSSSI, with methicillin resistant *Staphylococcus aureus (MRSA)* increasingly accounting for 60% of all infections.[4,5] As many as 40% of admitted patients remain hospitalized due to their need for intravenous (IV) antibiotics.[3] Thus, to reduce overall cost to the healthcare system, a viable oral alternative which can be taken in an ambulatory setting would be beneficial.

Many first-line antimicrobial therapies for CABP and aBSSSI are now becoming ineffective due to an increase in antibiotic resistance. Omadacycline (Nuzyra®) is an innovative broad-spectrum aminomethylcycline recently FDA approved for the treatment of CABP and aBSSSI. Because this medication is administered orally, it may offer an avenue to treat patients without the extra costs of a hospital stay. The purpose of this article is to evaluate omadacycline's safety and efficacy from clinical trial data for the treatment of CABP and aBSSSI.

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Pharmacokinetics

Omadacycline serum concentrations were evaluated by testing omadacycline dosages of 100 mg intravenously and 300 mg orally. It was determined that the clinical efficacy of omadacycline against common bacterial agents associated with aBSSSI and CABP could be based upon AUC levels (**TABLE 1**).[6,7] Oral omadacycline serum concentrations are affected by food, with absorption reduced 15% to 63% when given with meals.[6]

Mean protein binding for omadacycline was 21% and was not dose dependent for concentrations ranging from 0.1 to 10 mcg/mL.[7] Omadacycline does not interact with P-glycoprotein 1 (Pgp), breast cancer resistance protein (BRCP), multidrug resistance-associated protein 2 (MRP2), or organic anion transporter 3 (OAT3). There was a slight OATP1B1 and OATP1B3 reduction

Table 1 | Select Omadacycline Pharmacokinetics[5]

Clinical Dosing Regimen	LD[a] 200 mg IV MD[b] 100 mg IV q24h[c]	300 mg PO q24h
Absorption		
Cmax (mcg/mL)[d]	1.8	0.7
Tmax[e] (h)	0.55	2.5
AUC0-24 (mcg·h/L)[f]	8.8	5.9
Bioavailability (%)	100	34.5
Distribution		
Protein binding (%)	21%	21%
Volume of distribution (L)	256 L	Not Determined
Metabolism		
No CYP450 metabolism	N/A	N/A
Elimination		
Half life (h)	17	17
Clearance (L/h)	10.3	30.7
Biliary (%)	77.5	84
Renal (%)	27	14.4

[a]Loading Dose (LD); [b]Maintenance Dose; [c]Every 24 hours (Q24h); [d]Max Concentration (Cmax); [e]Time to max concentration (Tmax); [f]Area under the curve (AUC)

of ± 10.1%, but overall, the effect was minimal. OAT1 had a rate of inhibition by 32.1% and could reduce overall renal elimination.[7] Omadacycline appears to not be metabolized by CYP450 so the potential for drug-drug interactions are thought to be minimal.[7] Omadacycline is primarily eliminated via the hepatic system, however, a small amount (14.4%) is eliminated in the urine. Only 7.9% of omadacycline is removed by hemodialysis leading to the determination that no HD dosage adjustments are needed.[4]

Mechanism of Action

Omadacycline, like older generation tetracyclines, binds to the 30S subunit of the bacterial ribosome and inhibits both 16S and 23S rRNA protein synthesis. Omadacycline's novel ability comes from an aminomethyl group which was added to the C9 position of minocycline, granting it an increase in potency over earlier generations. This addition to omadacycline has allowed for an ability to overcome known tetracycline resistance factors such as tetracycline efflux and ribosomal protection. The structural change has also reduced gastrointestinal side effects compared to current tetracyclines on the market.[6]

Microbiological Activity

Omadacycline is unique from older tetracyclines due to its *in vitro* activity against a broad spectrum of bacterial species, including Gram-positive, Gram-negative, anaerobic, and atypical pathogens. Omadacycline has bactericidal activity against *M. catarrhalis*, *S. pneumoniae*, and *H. influenzae*. It also has bacteriostatic activity against *Enterococci* and *E. coli* isolates.[7] For tetracycline-sensitive and -resistant *S. aureus* strains, omadacycline maintains bacteriostatic activity with 4 times more potent activity over doxycycline.[7] Omadacycline also demonstrates an ability to overcome not only older generation tetracycline resistance (tetracycline efflux and ribosomal enzyme protection), but also resistances to other antibiotics such as methicillin, vancomycin, tetracycline, doxycycline, and ciprofloxacin.[8] Omadacycline was compared to older tetracycline generations to examine its efficacy against the common tetracycline resistance genes. Organisms carrying the genes for ribosomal protection enzymes (tetM, tetO, and tetS) and efflux (tetA, tetK, and tetL) were found to be susceptible to omadacycline.[9]

Clinical Trials

Omadacycline demonstrates activity against a number of gram positive organisms, including *Staphylococcus aureus* (S. aureus), *Enterococcus faecium* (E. faecium), *Enterococcus faecalis* (E. faecalis), *Streptococcus pneumoniae* (S. pneumoniae), and the beta-hemolytic streptococci (*Streptococcus pyogenes* and *Streptococcus agalactiae*) as well (**TABLE 2**)[9,10]. Omadacycline retains activity against beta-hemolytic streptococci species, *Streptococcus pyogenes* (group A) and *Streptococcus agalactiae* (group B) as well.[9]

Omadacycline has activity against gram negative pathogens, mainly the enterobacteriaceae family (**TABLE 2**).[6,9] Omadacycline carried particularly potent coverage against the enterobacteriaceae pathogens, *E. coli*, *K. pneumoniae*, and *H. influenzae*.[9] A study of 3383 *H. influenzae* isolates, including MDR pathogens, determined that 99% of isolates were inhibited by an omadacycline concentration of ≤ 2 mcg/mL.[10] For *M. catarrhalis*, omadacycline 100 mg IV inhibited all 1126 isolates with an MIC concentration of ≤1 mcg/mL.[10] Regarding MDR enterobacteriaceae pathogens, omadacycline 100 mg IV was able to inhibit 85.3% of the 1,439 non-ceftazidime susceptible pathogens it was tested against.[10]

Omadacycline exhibits activity against anaerobes including; *Bacteroides fragilis*, *Prevotella* spp., *Peptostreptococcus* spp., *Clostridium difficile, Clostridium perfringens*.[7] Omadacycline also has activity against *Legionella pneumophilia*, with a strong ability to inhibit isolates within macrophages.[7] Omadacycline offers comparable activity to tetracyclines and macrolides in its ability to inhibit mycoplasma species, with an average MIC ≤ 2 mg/L.[9] In addition, omadacycline may have activity against the bioterror agents, *Bacillus anthracis* and *Yersinia pestis*.[11]

Omadacycline was approved based upon one clinical trial comparing omadacycline to moxifloxacin for CABP, and two trials comparing omadacycline versus linezolid for aBSSSI. The OASIS-2, phase 3 trial has yet to be published, however preliminary data was made available. The OPTIC trial does not account for the number of patients switched from IV to oral therapy and is a limitation for the trial. A summary of the results for the three trials are included in **TABLE 3**.[2,12,13]

OPTIC

OPTIC is a phase 3, randomized, multi-center, double-blind, non-inferiority trial for patients with CABP. Patients were randomly allocated in a 1:1 ratio to receive either omadacycline 100 mg IV every 12 hours for 2 doses, then 100 mg IV every 24 hours (n=386) or moxifloxacin 400 mg IV or PO every 24 hours (n=388) for a total treatment duration of 7 to 14 days. A transition to oral omadacycline 300 mg every 24 hours or oral moxifloxacin 400 mg every 24 hours was a treatment option after 72 hours of initial IV therapy.[2]

Inclusion criteria were adults ≥ 18 years of age with A) at least three or more of the following symptoms: cough, purulent sputum production, dyspnea, or pleuritic chest pain in addition to at least two abnormal vital signs; B) had at least one clinical sign or laboratory finding associated with CABP; C) had radiographic confirmation of pneumonia and were characterized into the Pneumonia Severity Index (PSI) as either class II, III, or IV.[2] PSI classification is used to place patients into several risk categories based upon the severity of their pneumonia, risk category II (PSI) score 51 to 70), risk category III (71 to 90), or risk category IV (91 to 130). Patient specific factors, which include characteristics (eg. age, sex), comorbid conditions (eg. renal or hepatic disease), or vitals (eg. glucose, sodium, arterial pH) are given a point scale between 10 to 30 points. The overall score is used to determine a patients PSI category.[2]

Patients were excluded if they received an antimicrobial which could affect the outcome within 72 hours before the first dose of trial drug (in ≤ 25% of patients, a single short acting dose was allowed). Additional exclusion criteria included if they had hospital acquired pneumonia or empyema, had clinically relevant renal or hepatic dysfunction, or immunocompromised. For the oral medication therapy, adherence was measured by trial personnel based upon patient self-completed diaries and medication return.[2]

The primary endpoint was early clinical response, defined as survival with improvement in at least two of four symptoms (cough, sputum production, pleuritic chest pain, and dyspnea) and no worsening of symptoms at 72 to 120 hours without receipt of rescue antibacterial therapy. Symptom improvement was defined as a reduction in the 4-point scale (e.g. severe, moderate, mild, or absent). "Absent" is defined as no symptom, "mild" is defined as minimal symptom that does not interfere with daily activities, "moderate" is symptoms with interference in daily activities, and

Table 2 | *In vitro* activity of omadacycline 100 mg IV against Gram positive and negative organisms[6,9,10]

Organism	No. of isolates	MIC_{50} (mcg/mL)	MIC_{90} (mcg/mL
Gram Positive[9,10]			
MSSA[a]	16	0.125	0.5
MRSA[b]	39	0.25	0.5
MDR[c] MRSA	10	0.5	0.5
E. faecalis	31	0.25	0.5
MDR[c] E. faecalis	3	0.25	0.5
E. faecium	24	0.25	0.5
VRE[d] (faecium)	19	0.25	0.5
MDR[c]/VRE (faecium)	12	0.25	0.5
S. pneumoniae	41	≤0.06	0.125
PCN[e]-resistant S. pneumoniae	23	≤0.06	≤0.06
MDR[c]/PCN-resistant S. pneumoniae	18	≤0.06	≤0.06
S. pyogenes	30	0.125	0.25
S. agalactiae	118	0.125	0.125
Gram Negative[6,9]			
E. coli	3,541	0.5	2
K. pneumoniae	1,771	2	4
H. influenzae	53	1	2
M. catarrhalis	408	0.25	0.25

[a] MSSA (methicillin susceptible staph aureus); [b] MRSA (methicillin resistant staph aureus); [c] MDR (Multi-drug resistant); [d] VRE (Vancomycin resistant staph aureus); [e] PCN (penicillin)

"severe" is defined as limited ability to perform daily activity. The secondary endpoint analysis examined post-treatment response five to ten days after the end of treatment completion. Post-treatment response was defined as survival, requiring no further response of antimicrobial therapy. Safety for adverse events was followed using laboratory evaluation, vital signs, and electrocardiograph (ECG) data.[2]

Results for the intention-to-treat (ITT) population found that the primary endpoint for early clinical response was non-inferior in the omadacycline group (313 patients; 81.1%) compared to the moxifloxacin (321 patients; 82.7%: absolute difference = -1.6%; 95% CI, -7.1 to 3.8 %). Transition from IV to oral therapy occurred in 77.2% of patients in the omadacycline group and 75.8% of patients in the moxifloxacin group. For the post-treatment response, resolution of symptoms without the need for further therapy, the omadacycline group 87.6 % (338 patients) was non-inferior to the moxifloxacin group 85.1 % (330 patients), difference of 2.5 % (95% CI, -2.4 to 7.4 %).[2]

The percentage of patients with any adverse event was reported at rates of 48.5% (188 patients) in the omadacycline group and 41.1% (157 patients) in the moxifloxacin group. The most frequent reported adverse events were GI side effects with 10.2% (n=39) of patients in the omadacycline group and 18.5% (n=69) reported in the moxifloxacin group. Moxifloxacin had higher reported rates of diarrhea compared to omadacycline, 8% vs 1% respectively. *Clostridium difficile* was not reported in any patients in the omadacycline group and 2.1% within the moxifloxacin group. This is consistent with previous known data involving tetracycline class inhibition for *Clostridium difficile*. Overall, there were 12 deaths during the trial, eight in the omadacycline group and four in the moxifloxacin group. These occurred in patients who were greater than 65 years of age, and considered to have a progression in pneumonia, hospital-acquired pneumonia, respiratory compromise, cancer, or cardiovascular event.[2]

OASIS-1

OASIS-1 is a phase 3, randomized, multi-center, double-blind, non-inferiority trial for patients with acute bacterial skin and skin structure infections.[12] Patients were randomly allocated in a 1:1 manner to receive either omadacycline 100 mg IV every 12 hours for 2 doses, then 100 mg IV every 24 hours (n=316) or linezolid 600 mg IV every 12 hours (n=311) for 7 to 14 days.[12] The primary endpoint was early clinical response at 48 to 72 hours, defined as survival and at least a 20% reduction of lesion size without rescue antimicrobial therapy. The trial examined treatment outcomes with IV therapy only. A secondary endpoint was set to evaluate clinical response and need for further therapy after the last dose at seven to 14 days. For both endpoints, the non-inferiority margin was set at 10%.[12]

Inclusion criteria were adults ≥ 18 years of age with an aBSSSI from IV drug use, trauma, cellulitis, major abscess, or erysipelas. Infections were examined under a multi-center, standardized technique, and to qualify they were required to have a surface area of ≥ 75 cm^2 and have erythema, edema, or induration present. Patients were excluded if they received an antimicrobial within 72 hours of screening, had a chronic skin lesion for ≥ 3 months, or if the duration of treatment was expected to exceed 14 days. Patients with clinically relevant renal or hepatic dysfunction or oth-

Table 3 | Summary of Clinical Trial Data[2,12,13]

Trial	Interventions	Primary Endpoint	Results	Difference (95% CI)
OPTIC[2]	OMD[a] 100 mg IV Q12H x 2 doses, then 100 mg IV Q24H (n=386) MOX[b] 400 mg IV Q24H (n=388)	Survival with improvement and no worsening of symptoms at 72 to 120 hours, without receipt of rescue antibacterial therapy	OMD 81.1% MOX 82.7%:	-7.1 to 3.8 %
OASIS-1[12]	OMD 100 mg IV Q12H x 2 doses, then 100 mg IV Q24H (n=316) LZD[c] 600 mg Q12H (n=311)	Survival at 48 to 72 hours with at least a 20% reduction of lesion size without rescue antimicrobial therapy	OMD 84.8% LZD 85.5%:	-6.3% to 4.9%
OASIS-2[13]	OMD 450 mg PO Q24H x 2 doses, then 300 mg PO Q24H (n=314) LZD 600 mg Q12H (n=310)	Survival at 48 to 72 hours with at least a 20% reduction of lesion size without rescue antimicrobial therapy	OMD 87.5% LZD 82.5%	-0.2% to 10.3%

[a]OMD (omadacycline); [b]MOX (moxifloxacin); [c]LZD (linezolid)

erwise immunocompromised patients were excluded as well. [12]

Results for the modified intention-to-treat population (patients with at least one gram-positive bacterial pathogen and no gram-negative pathogens) found that the primary endpoint for early clinical response was non-inferior in the omadacycline group (268 patients; 84.8%) compared to the linezolid group (266 patients; 85.5%) with an absolute difference of -0.07%; 95% CI, -6.3% to 4.9%. For the seven to 14-day post-treatment response (resolution of symptoms without the need for further therapy), the omadacycline group saw 272 patients (86.1%) that were non-inferior to the linezolid group 260 patients (83.6%) with an absolute difference of + 2.5%; 95% CI, -3.2% to 8.2%. In both treatment groups, there was at least a 50% reduction in lesion size within 72 hours, and at least a 99% reduction by end of course treatment seven to 14 days.[12]

The overall incidence of adverse events were reported by 48.3% (156 patients) in omadacycline group and 45.7% (147 patients) in the linezolid group. For GI side effects, the omadacycline treatment arm reported nausea at 12.4% (40 patients) and vomiting at 5.3% (17 patients). Linezolid-treated patients reported nausea at 9.9% (32 patients) and vomiting at 5.0% (16 patients). There were 20 reported mortalities during the trial, 12 for omadacycline and eight for linezolid. However, the mortalities seen were not considered to be related to the trial drug by investigators.[12]

OASIS-2

OASIS-2 is a phase 3, randomized, multi-center, double-blind, parallel, non-inferiority trial for patients with aBSSSI.[13] Patients were randomly allocated in a 1:1 manner to receive either oral omadacycline 450 mg every 24 hours for two doses followed by oral 300 mg every 24 hours (n=360) or oral linezolid 600 mg every 12 hours (n=360) for seven to 14 days. The primary endpoint was early clinical response at 48 to 72 hours and was defined as survival with at least 20% reduction of lesion size without rescue antimicrobial therapy. A secondary endpoint was set to evaluate clinical response and need for further therapy after the last dose at seven to 14 days. For both endpoints, the non-inferiority margin was set at 10%.[13]

Inclusion criteria were adults ≥ 18 years of age with a qualifying aBSSSI; trauma, cellulitis, major abscess, or erysipelas. Infections were examined under a multi-center, standardized technique, and to qualify, they were required to have a surface area of ≥ 75 cm^2 and have erythema, edema, or induration present. Female patients were required to adhere to a reliable method of birth control during the study and 30 days after. Patients were excluded if they received any investigational drug within the past 30 days, had clinically significant immunological disease, renal disease, a positive diagnosis for septic shock, history of hypersensitivity to tetracycline or linezolid, or any woman who was pregnant or nursing.[13]

Results for the modified intention-to-treat population found that the primary endpoint for early clinical response was non-inferior in the omadacycline group (315 patients; 87.5%) compared to the linezolid group (297 patients; 82.5%) with an absolute difference of 5.0%;95% CI, -0.2% to 10.3%. For the seven to 14-day post-treatment response (resolution of symptoms without the need for further therapy), the omadacycline group (303 patients; 84.2%) was non-inferior to the linezolid group (291 patients; 80.8%) with an absolute difference 3.3%; 95% CI, -2.2% to 8.9%.[13]

The overall incidence of any adverse event, reported 30 to 37 days after treatment end, was 46.51% (171 patients) in the omadacycline group and 24.25% (89 patients) in the linezolid group. The large variance in adverse event reporting comes mainly from a large increase in omadacycline reported nausea 30.16% (111 patients) and vomiting 16.85% (62 patients) versus linezolid reported nausea 7.63% (28 patients) and vomiting 3% (11 patients). The number of serious adverse events were equal for omadacycline and linezolid at 1.36% (5 patients). All-cause mortality was not documented in any patients in the omadacycline group and one patient in the linezolid group.[13]

Table 4 | Omadacycline Dosing and Administration[1]

Infection	Loading Dose	Maintenance Dose	Duration
CABP[a]	Day 1: 200 mg IV over 60 minutes **OR** 100 mg IV over 30 minutes twice	100 mg IV daily over 30 minutes **OR** 300 mg PO daily	7-14 days
aBSSSI[b]	Day 1: 200 mg IV over 60 minutes **OR** 100 mg IV over 30 minutes twice	100 mg IV daily over 30 minutes **OR** 300 mg PO daily	7-14 days
aBSSSI[b] **(PO only)**	Day 1 and 2: 450 mg PO daily	300 mg PO daily	7-14 days

[a]OMD (omadacycline) [b]MOX (moxifloxacin) [c]Q12H (every 12 hours) [d]Q24H (every 24 hours) [e]IV (intravenous) [f]LZD (linezolid)

Prescribing Information

Adverse Effects and Precautions

The commonly reported adverse effects (≥10%) are nausea and vomiting.[5] Infrequent adverse events (1-10%) include headache, diarrhea, infusion site reactions, insomnia, constipation, and increases in aminotransferases. Electrocardiograph results were examined for patients taking omadacycline and it was found to not have an effect on QTc intervals or heart rate. Omadacycline does however bind to and inhibit M2 receptors, creating the possibility of an increase in heart rate at the SA node.[7,14] Caution is warranted in patients with cardiovascular disease, particularly atrial fibrillation.[1]

Patients on an anticoagulation regimen, such as warfarin, may require an adjustment of their anticoagulant therapy during use of omadacycline. Consideration of increased INR monitoring during omadacycline use is advisable. Overall, due to the lack of omadacycline metabolism, the probability of drug-drug interactions should be considered low.[1]

Omadacycline also has general tetracycline precautions and class effects, including tooth discoloration, enamel hypoplasia, and inhibition of bone growth. Because of these effects, omadacycline should be avoided in pregnant mothers during their second and third trimesters as well as children less than 8 years of age. Additional precautions are photosensitivity, abnormal liver function tests, pancreatitis, increases in BUN, hyperphosphatemia, and acidosis. Avoid omadacycline if a patient has a known tetracycline allergy.[1]

Dosing and Administration

Omadacycline is FDA indicated for the treatment of CABP and aBSSSIs. It is available in both IV (100 mg reconstituted) and oral form (150 mg tablet) and has specific loading dose and maintenance dose recommendations (Table 4).[1] Treatment durations for both indications, CABP and aBSSSI, range between seven to 14 days. Patients that show clinical improvement without any worsening of symptoms within 48 to 72 hours can be considered for seven-day treatment. Patients who are not clinically stable by day five or have a worsening of symptoms should remain on omadacycline for the full 14 days. It is recommended to take the oral omadacycline formulation with a full glass of water on an empty stomach, having fasted for at least 4 hours to allow for full absorption.[6] Patients should not consume food or liquids, other than water, for at least 2 hours after administration.[1] For products such as dairy, antacids, or multivitamins, it is recommended to wait 4 hours after taking omadacycline, otherwise a reduction in absorption may be seen ultimately reducing the efficacy of omadacycline.[1]

Omadacycline does not require dose adjustment for patients with hepatic dysfunction (Childs-Pugh Score A, B, C). Additionally, omadacycline does not require dose adjustments for renal impairment. It has been studied in patients with end-stage renal disease (ESRD) on hemodialysis that no clinically meaningful difference in pharmacokinetics were observed.[15,16]

Omadacycline may be an option for the empiric treatment of CABP due to its gram positive, gram negative, and atypical activity, covering all of the common bacterial pathogens associated with CABP. For aBSSSI, Omadacycline should be reserved as an alternative agent for instances where other therapeutic agents have failed or the patient has an allergy to other first line agents. The oral-only omadacycline option is a consideration for patients if the physician feels the patient is clinically stable for discharge and/or could adequately adhere to home therapy.

Cost

A recent study of patients with aBSSSI analyzed omadacycline cost to the standard-of-care treatment: vancomycin. During the examination of aBSSSI, researchers compared the cost of inpatient IV vancomycin vs. outpatient oral-only omadacycline, IV vancomycin vs. single dose inpatient IV omadacycline followed by outpatient oral omadacycline, and inpatient IV vancomycin vs. three doses of inpatient IV omadacycline doses (48-72 hours) then outpatient oral omadacycline. A significant reduction in overall per-patient cost of > $2,000 per stay was observed in all categories. This is in major part due to the reduction in hospital stay, which is a primary factor of a patient's total health care cost.[3]

The manufacturer of omadacycline, Paratek Pharmaceuticals, Inc., has created a 340B patient support program for individuals at or below 350% of the federal poverty limit. To further qualify, individuals must be 18 years of age or older, have no current prescription coverage, and be a U.S. citizen. The amount of savings is as of yet unspecified by the manufacturer and is determined on a case-by-case basis. At this time, further data into exact pricing for omadacycline is unclear. Possible estimates include a wide range,

Conclusion

Omadacycline appears to be a safe and effective therapy option for the treatment of CABP and aBSSSI. Pharmacologically, omadacycline's oral dosage form, long half-life, and decreased potential for drug-drug interactions due to its lack of CYP metabolism are all reasons for which omadacycline is a clinically relevant option. With the ease of a once daily oral option, adherence may be increased for patients in the outpatient setting. Omadacycline shows activity against multidrug resistant organisms, offering an efficacious choice where other antimicrobials have begun to fail. Omadacycline also serves as an alternative agent for patients with reduced therapeutic options due to antibiotic allergies. Its broad-spectrum activity against gram-positive, gram-negative and atypical pathogens makes omadacycline a viable choice in CABP treatment. For aBSSSI, omadacycline's activity against MDR staph aureus represents an effective treatment without the need for extended hospital stays.

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