

Case Study



Sultamicillin induced Blurring of Vision, Sweating, Palpitation and Dizziness: A Case Series

¹Dr. Ayush Jain, ²Dr. Shikha Dwivedi, ³Dr. Libin Sanjeev L, ⁴Dr. Sanjay Gaur, ⁵Dr. Annwasha Chaudhury*

¹MD, DNB, Assistant Professor, Dept of Pharmacology, GDMC, Dehradun, Uttarakhand, India.

²MD, Assistant Professor, Dept of Pharmacology, GDMC, Dehradun, Uttarakhand, India.

³MBBS, Post graduate, Dept of Pharmacology, GDMC, Dehradun, Uttarakhand, India.

⁴MD, Professor & Head, Dept of Pharmacology, GDMC, Dehradun, Uttarakhand, India.

⁵*MBBS, Post graduate, Dept of Pharmacology, GDMC, Dehradun, Uttarakhand, India.

*Corresponding author's E-mail: a.chaudhuri1993@gmail.com

Received: 08-01-2024; Revised: 03-02-2024; Accepted: 10-02-2024; Published on: 15-02-2024.

ABSTRACT

Sultamicillin is a beta lactam antibiotic, frequently used in patients with gram positive bacterial infection. It has a known myriad of adverse effects such as pseudomembranous colitis, anaphylactic reactions, Kuoni's syndrome, somnolence, sedation, headache, convulsions, dyspnoea etc. The authors reported 3 isolated cases of sultamicillin induced adverse effects, from patients in post-op care. Among the adverse effects reported, blurring of vision, sweating, palpitation and dizziness without hypotension were common in all the cases. These adverse effects are serious in nature and require high clinical suspicion for its diagnosis.

Keywords: Case study, Sultamicillin, dizziness, vision, adverse effects.

INTRODUCTION

Sultamicillin is an antibiotic compound comprising of ampicillin and the beta-lactamase inhibitor sulbactam, available in 375mg. Each 375 mg film-coated tablet of sultamicillin tosylate (Unasyn), a mutual prodrug of sulbactam and ampicillin, yields the equivalent of 147 mg sulbactam and 220 mg ampicillin in active ingredients.¹

Sulbactam is a β -lactamase inhibitor. In order to prevent bacteria from producing β -lactamase, which is an enzyme that breaks down ampicillin, this medication is administered together with β -lactam antibiotics. The main function of sulbactam is to prevent the suicide of β -lactamase, protecting more strong beta-lactams like ampicillin.¹ Sulbactam, which has a beta-lactam ring and rather modest antibacterial action, inhibits PBPs 1 and 3, but not 2 of the penicillin-binding proteins.

Ampicillin is used to treat gram-positive and gram-negative bacterial infections. It was the first penicillin with "broad spectrum" activity against gram-positive bacteria such as *Streptococcus pneumoniae*, *Streptococcus pyogenes*, some isolates of *Staphylococcus aureus* (but not penicillin-resistant or methicillin-resistant strains), *Trueperella*, and some *Enterococcus*. It is among the handful of antibiotics that has been shown to be effective against multidrug resistant *Enterococcus faecalis* and *E. faecium*.¹ The co-administration of sulbactam, a medicine that inhibits beta lactamase, an enzyme produced by bacteria that inactivates ampicillin and similar antibiotics, broadens its spectrum of activity.

While sultamicillin is an effective antibiotic, it's important to be aware of the potential adverse effects that can arise

from its use. Sultamicillin is generally well tolerated. The majority of documented side effects were mild to moderate in severity and were generally tolerated with continuous treatment. Few of the more serious adverse effects associated with sultamicillin are pseudomembranous colitis, anaphylactic reactions, Kuoni's syndrome, somnolence, sedation, headache, convulsions, dyspnoea. In rare cases, sultamicillin can cause serious skin conditions such as toxic epidermal necrolysis (TEN), Stevens-Johnson syndrome (SJS), and erythema multiforme.²⁻⁵

In this case series, we report the similar adverse effect profile in 3 patients taking Sultamicillin 375 mg orally.

Case 1: A 35 years old female patient, a case of left ureteric calculus underwent ureteroscopic removal and Double-J stent in place on 6th July 2023 with no history of diabetes mellitus/ hypertension, following which she was started with Tablet Sultamicillin 375 mg thrice a day, tablet pantoprazole 40mg Once a day, Tablet Drotin M twice a day, based on the urine culture and sensitivity. She started experiencing headache, blurring of vision, sweating, palpitation and dizziness after 1 day and continued for further 5 days. Blood sugar and blood pressure were within normal limits. Drugs were continued from 7-11 July after which Sultamicillin was stopped and other continued. The symptoms subsided after 1 day. The WHO causality scale for adverse reaction came out to be probable.

Case 2: A 62 year male, a case of Gall stone underwent cholecystectomy on 10th July, following which he was started on Tablet Sultamicillin 375 mg thrice a day, tablet pantoprazole 20mg once a day, tablet diclofenac 50 mg once a day for 10 days. He was a hypertensive for 10 years which was controlled on tablet enalapril 5mg once a day.



He experienced headache, sweating and palpitations after 6 hours of taking medicine. The drug was stopped and changed to tablet ofloxacin 200mg twice a day. The symptoms subsided after few hours of stopping the drug.

The WHO causality scale for adverse reaction came out to be probable.

Case 3: A 50 years old male suffering from right flank pain, heaviness and on & off fever for 3weeks. After CT investigation found hydronephrosis due to right PUJ calculus measuring 22x14mm, and 2 in lower calyceal calculi measuring 9x5mm and 8x6mm. Report on Routine blood work i.e CBC, KFT and LFT are within normal limits. Urine culture and sensitivity are normal and sterile. No history of diabetes and hypertension. Patient underwent right PCNL plus DJ stenting under local anaesthesia on 17th July 2023. Patient was on inj cefoperzone + sulbactam 1.5mg twice a day, pantoprazole 40mg once a day and diclofenac aqueous 75mg as on when required. After 2 days he was discharged on Sultamicillin 375 mg thrice a day, tablet pantoprazole 40mg before breakfast and zeronol SP for 5 days. Patient complains about palpitation and dizziness on very next day on phone. Sultamicillin was replaced with pulmocef 500mg twice a day. Patient gave feedback on stent removal visit that he felt better after the medicine was changed.

DISCUSSION

The three cases presented here suggest that sultamicillin can cause adverse reactions, such as headache, blurring of vision, sweating, palpitation, and dizziness. These symptoms are consistent with the known side effects of sultamicillin. The WHO causality scale for adverse reaction was probable in all three cases, suggesting that the adverse reactions were likely caused by sultamicillin.¹ It is important to note that these are just three cases and the adverse reactions may not be caused by sultamicillin in all cases. However, the cases presented here suggest that sultamicillin should be used with caution and patients should be monitored for adverse reactions.

The patients in all three cases were taking other medications, so it is possible that the adverse reactions were caused by one of the other medications. However, the fact that the symptoms resolved after sultamicillin was

stopped suggests that sultamicillin was the likely cause of the adverse reactions.

In all three cases the patients were adults, so it is not clear if children are at a higher risk of adverse reactions to sultamicillin. Also, all three cases had normal renal function, so it is not clear if patients with renal impairment are at a higher risk of adverse reactions to sultamicillin.

CONCLUSION

The three cases presented here suggest that sultamicillin can cause adverse reactions, such as headache, blurring of vision, sweating, palpitation, and dizziness. However, it is important to note that these are just three cases and the adverse reactions may not be caused by sultamicillin in all cases. Also, the patients in all three cases were adults and had normal renal function, so it is not clear if children or patients with renal impairment are at a higher risk of adverse reactions to sultamicillin. Overall, the cases presented in this paper suggest that sultamicillin should be used with caution and patients should be monitored for adverse reactions.

Source of Support: The author(s) received no financial support for the research, authorship, and/or publication of this article

Conflict of Interest: The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

REFERENCES

1. Torrent Pharma /92/UA/LL/SC/P – 2017 SULTAMICILLIN- 147 mg sulbactam and 220 mg ampicillin.
2. The American Society of Health-System Pharmacists. Archived from the original on 12 July 2015. Retrieved 1 August 2015.
3. Magdesian KG. Equine Pharmacology, an Issue of Veterinary Clinics of North America: Equine Practice, E-Book. Elsevier Health Sciences. 2017, p. 59.
4. Pitts N. E., Gilbert G. S., Knirsch A. K., Noguchi Y. Worldwide clinical experience with sultamicillin. APMIS. Supplementum, 1989;5:23–34.
5. Pitts N. E., Gilbert- APMIS. Supplementum, 2018;10:75–87.

For any questions related to this article, please reach us at: globalresearchonline@rediffmail.com

New manuscripts for publication can be submitted at: submit@globalresearchonline.net and submit_ijpsrr@rediffmail.com

