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Case Report

When a Cure Becomes the Crisis: A Rare and Severe Adverse Drug Reaction to Fluoroquinolones Causing Stevens-Johnson Syndrome in an Elderly Male

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ABSTRACT

For the past several years and into the foreseeable future, Fluoroquinolone (FQ) antibiotics have been the most widely used in human health, animal aquaculture, and animal agriculture due to their broad antimicrobial activity in treating respiratory, digestive, stomach, and urinary tract infections. Fluoroquinolones such as levofloxacin, ofloxacin, and ciprofloxacin are broad-spectrum antibiotics that are effective against Gram-negative and moderately active against Gram-positive aerobic bacteria. The most common side effects of fluoroquinolones include gastrointestinal problems and central nervous system issues. These side effects typically appear within the first few days of treatment and often manifest within the first 7-10 days of treatment. In this case, an elderly male patient developed symptoms of Stevens-Johnson syndrome within one day after taking metronidazole and a combination of ofloxacin and ornidazole for loose stools and came to a tertiary care hospital. The diagnosis was confirmed based on a complete blood count, C-reactive protein levels, serum creatinine levels, and the body surface area affected. Diagnosed as mild Stevens-Johnson Syndrome (SJS), the mortality rate was expected to be nearly 12.1% based on the severity-of-Illness Score for Toxic Epidermal Necrolysis (SCORTEN) criteria. And this condition was treated with saline dressings, pain management, steroids, antihistamines, and IV fluids. However, even if it is milder, it is multisystemic, and organs show dangerous symptoms that can lead to life-threatening situations and often death, so careful diagnosis, treatment, and follow-up are needed.

Keywords: Fluoroquinolones, Ofloxacin, SCORTEN criteria, Stevens-Johnson syndrome.

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INTRODUCTION

Fluoroquinolones (FQs) are among the most extensively prescribed antibiotics worldwide due to their broad-spectrum activity against Gram-negative and some Gram-positive bacteria. They are used in respiratory, gastrointestinal, urinary, and systemic infections (Collins and Osheroff, 2024). Some examples, such as ofloxacin, levofloxacin, and ciprofloxacin, are generally considered safe. But they also cause rare, severe adverse drug reactions, one of which is Stevens-Johnson Syndrome (SJS) (Dowling, 2024). A rapid, excruciating rash that results in blisters and skin and mucous membrane peeling is the hallmark of SJS, an uncommon, severe, and potentially lethal illness (Boo *et al.*, 2025). The disease has an estimated incidence of 1-6 cases per million person-years, with higher susceptibility in the elderly or immunocompromised. SJS is a dangerous immune-mediated reaction typically triggered by medications or infections. It occurs when a drug antigen or its metabolite interacts with major histocompatibility complex class I molecules to form an immunogenic complex that is presented to T cells. This activates cytotoxic $CD8^+$ T lymphocytes and natural killer cells, leading to the release of granulysin, a protein that induces keratinocyte apoptosis (Justice *et al.*, 2025). The result is extensive epidermal detachment and mucosal sloughing, which characterize SJS. Clinically, patients present with fever, malaise, erythematous macules, and blistering, with severity assessed by severity-of-Illness Score for Toxic Epidermal Necrolysis (SCORTEN) criteria to predict mortality (Sotozono and Ueta, 2025). Treatment is mainly supportive, including fluid and electrolyte management, pain control, wound care, corticosteroids, and antihistamines (Hama *et al.*, 2025). Early recognition and prompt discontinuation of the offending drug are critical to reducing morbidity and mortality. This case highlights a rare, severe FQ-induced SJS in an elderly patient, underscoring the importance of vigilance and timely intervention in high-risk populations.

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CASE REPORT

A 66-year-old male patient presented with complaints of seven episodes of diarrhea on July 1, 2025, for which he was prescribed Tab. Metrogyl (metronidazole) and Tab. Oflox-OZ (ofloxacin+ornidazole) for the management of loose stools. Within 2 days, specifically on July 3, the patient developed severe symptoms including fever, bilateral eye redness and itching, watery discharge from the eyes, redness, and swelling of the bilateral hands and feet, and an erythematous rash on the tongue and scrotal region. The patient was subsequently brought to a tertiary care hospital. His past medical history revealed a known allergy to sulfa drugs. The patient's appetite, bowel, bladder, and sleep were normal, and he is a smoker. Systemic and physical examinations were found to be within normal ranges. Based on the clinical presentation and temporal relationship with drug administration, the attending physician suspected Oflox-OZ (ofloxacin+ornidazole) as the causative agent responsible for the onset of SJS symptoms. The offending drug was immediately withdrawn.

On examination, the patient was found to be hemodynamically unstable, and serum creatinine and C-reactive protein levels were abnormal (Table 1). The affected body surface area was less than 10%. Finally, based on subjective evidence (the patient's chief complaints) and objective evidence (laboratory investigations), and using the SCORTEN criteria (Table 2), the patient was diagnosed with drug-induced SJS.

We determined that the patient had Stevens-Johnson syndrome because the body surface area affected is less than 10%. Based on the SCORTEN diagnostic criteria, the points obtained were 2, indicating an estimated mortality of approximately 12.1%.

The patient was admitted, observed, and treated in the hospital for a total duration of 5 days and discharged on the 6th Day. On the first day of the hospital stay, the patient presented with chief complaints of fever, bilateral eye redness and itching, watery discharge from the eyes, redness and swelling of both hands and feet, and an erythematous rash on the tongue and scrotal area. The patient was conscious and orientated. A systemic and physical examination was performed, and blood pressure and pulse rate, respiratory rate, and GRBS were measured. All were normal, except for GRBS levels, which were 377 mg/100 mL. Initially, treatment began with IV fluids. To suppress immune-mediated inflammation associated with SJS, the patient received a methylprednisolone injection (60 mg intravenously once daily). For gastric protection, pantoprazole injection (40 mg, administered intravenously once daily) was used. To reduce fever, a paracetamol injection (1 g intravenously as needed) was prescribed. To manage itching and allergic symptoms, an Atarax tablet (25 mg) was prescribed orally once daily. For blood sugar control, the patient was given the tablet ISTAMET (sitagliptin+metformin hydrochloride) (50/500 mg orally once daily). Candida mouth paint was applied (twice daily) to treat oral infections, and saline bandages were used to encourage wound healing and prevent infection.

On the second and third days of the hospital stay, along with the first day's medications, topical BACT (mupirocin) ointment (applied twice daily) was used to promote healing and prevent skin infections. The patient also received an injection of OPTINEURON (1 amp intravenously once daily), a multivitamin injection. Tramadol injection (1 amp intravenously as needed) was administered for pain management, and BECLAMETHASONE ointment (applied twice daily) was used to treat skin inflammation and lesions.

On the fourth day, in addition to the previous drugs, the patient was started on tablet PREDMET (methylprednisolone) (16 mg orally once daily) to treat inflammation further. Tablet BEFAST PLUS (1 tablet orally once daily) was given to support healing and treat inflammatory conditions. Tablet AMITILIFT (amitriptyline) (25 mg orally once daily) was added for neuronal support, and triamcinolone cream was prescribed to treat localized inflammation.

On the fifth day, the prohance-D nutritional supplement (2 scoops orally twice daily) was added to the treatment along with all the previously mentioned medications (Table 3). The patient showed a total recovery from the condition and was discharged on the 6th Day, accompanied by a discharge summary and a prescription for medications (Table 4).

Table 1: Abnormal laboratory investigations.

Laboratory parameters	Observed values	Normal values
Complete blood count		
RBC count	4.30 million/ cu.mm	4.50-6.50 million/ cu.mm
WBC count	11,300 cells/ cu.mm	*4400* - 11000 cells/ cu.mm
Hemoglobin	12.6 g/100 mL	14.0-18.0 g/100 mL
Hematocrit (PCV)	38.4%	42.0-54.0%
Neutrophils	85%	40.0-75.0%
Lymphocytes	10%	20.0-45.0%
General Random Blood Sugar (GRBS)	377 mg/100 mL	70-100 mg/100 mL
Biochemistry		
Serum creatinine	0.70 mg/100 mL	0.80-1.30 mg/100 mL
Microbiology		
C-reactive protein	113.99 mg/L	<5 mg/L

Abbreviations: PCV: Packed Cell Volume; RBC: Red Blood Cells; WBC: White Blood Cells.

DISCUSSION

The unusual and sometimes fatal mucocutaneous reaction known as Stevens-Johnson Syndrome (SJS) is typically brought on by medications (NSAIDs, antibiotics, and antiepileptics) (Miya, 2019). SJS is a severe and potentially fatal hypersensitivity reaction that can be brought on by infections (like mycoplasma pneumonia) or medication side effects (like sulfa medications, phenytoin, carbamazepine, lamotrigine, phenobarbital, allopurinol, piroxicam, nevirapine, and diclofenac) (Sotozono, 2025).

In this report, a male patient aged 66 years old took Oflox-OZ (ofloxacin+ornidazole) for diarrhea, and after that, he developed SJS. These rapid onsets of symptoms occurred within 2 days after starting the drug.

Table 2: Stevens-Johnson Syndrome (SJS) Diagnostic criteria (SCORTEN).

Parameters	Score
Age (>40 years)	1
Malignancy	0
Tachycardia (>120 beats per minute)	0
Body surface area involved with epidermal detachment (>10%)	0
Serum urea (>28 mmol/L)	0
Blood sugar levels (>252 mg/100 ml)	1
Serum bicarbonate levels (<20 mmol/L)	0

The patient's clinical presentations included fever, a painful rash, mucosal involvement, eye redness, and swelling of the extremities, which are the clinical manifestations of early SJS. The patient has an allergy to sulfa drugs, which is a risk factor that makes them more prone to developing severe reactions.

Laboratory results supported the diagnosis, showing elevated C-reactive protein levels indicating systemic inflammation, along with abnormal blood counts and uncontrolled blood sugar. According to the SCORTEN scoring system, the patient scored 2 points, corresponding to a mortality risk of approximately 12.1%. Although the body surface area affected was less than 10%, the severity of symptoms, particularly mucosal and systemic involvement, warranted aggressive inpatient management. This emphasizes that even "limited" SJS should never be underestimated.

The management approach followed in this case was timely and appropriate. Withdrawal of the suspected drug was the first and most important step. The patient was stabilized with intravenous fluids, corticosteroids to reduce immune-mediated inflammation, pantoprazole for gastric protection, and antibiotics and topical preparations to prevent infections. Symptomatic relief was provided with antihistamines, analgesics, and nutritional support, while strict monitoring of blood sugar ensured safe

Table 3: Drug chart.

Sl. No.	Brand name	Generic name	Dose	Roa	Freq
1.	INJ. Methylprednisolone	Methylprednisolone	60 mg	IV	OD
2.	INJ. Pan	Pantoprazole	40 mg	IV	1-0-0
3.	INJ. PCM	Paracetamol	1 g	IV	SOS
4.	Tab. Atarax	Hydroxyzine	25 mg	PO	OD
5.	Oint. T-BACT	Mupirocin	-	L/A	1-0-1
6.	INJ. Optineuron	(vitamin B1) (100 mg)+vitamin B6 (100 µg)+D-panthenol, 50 mg	1 amp	IV	OD
7.	INJ. Tramadol	Tramadol, 50 mg	1 amp	IV	SOS
8.	Oint. Beclomethasone	Beclomethasone Dipropionate	-	L/A	1-0-1
9.	candid mouth paint	Clotrimazole	-	L/A	1-0-1
10.	Tab. PREDMET	Methylprednisolone	16 mg	PO	1-0-0
11.	Tab. Befast PLUS	B-complex with minerals	1tab	PO	0-1-0
12.	Cap. PANTOCID	Pantoprazole	1cap	PO	1-0-0
13.	Tab. ISTAMET	Sitagliptin + Metformin	50/500 mg	PO	0-1-0
14.	Tab. AMILIFT	Amitriptyline	25 mg	PO	0-0-1
15.	cream triamcinolone	Triamcinolone Acetonide		L/A	1-0-1
16.	Tab. Gemer	Metformin+Glimepiride	1tab	PO	1-0-1
17.	Prohance-D NUTR	Nutritional Supplement	2 scoops with 1 glass of milk	PO	OD
18.	Prohance diskettes	Protein Supplement	1 biscuit	PO	1-0-1

Abbreviations: PO: Per Oral.

Table 4: Discharge medications.

Sl. No.	Drug name	Dose	Route	Frequency
1.	Tab. PREDMET (methylprednisolone)	16 mg	PO	1-0-0
2.	Tab. Atarax (hydroxyzine)	25 mg	PO	OD
3.	Tab. ISTAMET (sitagliptin+metformin)	50/500 mg	PO	OD
4.	Tab. Befast PLUS	1 tablet	PO	1-0-0
5.	Cap. PANTOCID (pantoprazole)	40 mg	PO	1-0-0
6.	Tab. AMILIFT (amitriptyline)	25 mg	PO	0-0-1
7.	T-BACT (mupirocin) ointment	-	Topical	Twice Daily
8.	Cream triamcinolone	-	Topical	Twice Daily
9.	Beclomethasone ointment	-	Topical	Twice Daily
10.	Candid mouth paint	-	Topical	Twice Daily

Abbreviations: PO: Per Oral.

recovery. Gradual transition from injectable to oral medications during hospitalization further helped stabilize the patient before discharge.

CONCLUSION

This case indicates the importance of early detection of adverse drug reactions for effective treatment, as it can also be mistaken for another infection, so an early diagnosis is made to improve the patient's life. It also underlines the importance of monitoring new symptoms closely after starting any medication. Early suspicion, immediate discontinuation of the offending drug, and a multidisciplinary treatment approach significantly contributed to a positive outcome.

This case highlights a rare but severe adverse drug reaction associated with fluoroquinolones. Although these agents are broadly prescribed, delayed recognition of such reactions can be fatal. Early identification of symptoms and prompt discontinuation of the offending drug are essential to reducing morbidity and mortality.

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ABBREVIATIONS

SJS: Stevens-Johnson syndrome; **FQ:** Fluoroquinolone; **SCORTEN:** Severity-of-Illness Score for Toxic Epidermal Necrolysis; **GRBS:** General random blood sugar; **IV:** Intravenous; **PO:** Per oral (by mouth); **OD:** Once daily; **SOS:** If necessary; **L/A:** Local application; **Tab:** Tablet; **Inj:** Injection; **Amp:** Ampoule; **Cap.:** Capsule; **Oint:** Ointment; **NSAID:** Non-Steroidal Anti-Inflammatory Drug.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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