Research Square

Preprints are preliminary reports that have not undergone peer review.
They should not be considered conclusive, used to inform clinical practice,
or referenced by the media as validated information.

Title: Breaking the belief – A rare case of Pantoea septica bacteraemia in an immunocompetent child

Gaurav Chotaliya
M. P. Shah Medical College
Krunal Mehta
krunaldmehta@yahoo.co.in
M. P. Shah Medical College
Pushpa Kateshiya
M. P. Shah Medical College
Bhoomika Joshi
M. P. Shah Medical College
Harmika Parmar
M. P. Shah Medical College

Case Report

Keywords: Pantoea septica, bacteraemia, immunocompetent, MALDI-TOF MS, AmpC β-lactamase, emerging pathogen, case report, India

Posted Date: July 25th, 2026

DOI: https://doi.org/10.21203/rs.3.rs-10058446/v1

License: This work is licensed under a Creative Commons Attribution 4.0 International License.
Read Full License

Additional Declarations: No competing interests reported.

Abstract

Background

Pantoea septica is a recently recognized member of the genus *Pantoea* and is rarely implicated in human infections. Most reported cases worldwide have occurred in immunocompromised individuals. We report the first case of *P. septica* bacteraemia in an immunocompetent child and describe its antimicrobial susceptibility pattern to facilitate early recognition and appropriate management.

Case Presentation:

A 1-year-9-month-old boy presented with fever, chills, cough, and rhinorrhoea of 15 days' duration. Blood culture yielded a slow-growing, yellow-pigmented, non-lactose-fermenting Gram-negative bacillus. Conventional biochemical testing suggested *Pantoea* spp.; however, species-level identification was difficult because of its close resemblance to members of the *Klebsielleae* tribe. The isolate was identified as *Pantoea* spp. by VITEK-2 (98% probability) and subsequently confirmed as *P. septica* by MALDI-TOF MS (score 1.99). Antimicrobial susceptibility testing, interpreted using CLSI Enterobacterales breakpoints, demonstrated resistance to ampicillin, third-generation cephalosporins, and older β-lactam/β-lactamase inhibitor combinations, with susceptibility to cefepime, carbapenems, aminoglycosides, and fluoroquinolones. Following escalation of therapy to meropenem, the patient showed rapid clinical improvement, and follow-up blood cultures were sterile.

Conclusion

This report highlights the pathogenic potential of *P. septica* to cause bloodstream infection in immunocompetent hosts. Accurate identification may require automated methods because conventional biochemical techniques may not reliably differentiate *P. septica* from other *Pantoea* species. Continued surveillance is warranted to better define its epidemiology, clinical spectrum, and antimicrobial resistance patterns.

Background

The taxonomically unstable genus *Pantoea* was previously classified within the tribe *Klebsielleae* under Ewing’s classification but has now been reclassified under the order *Enterobacterales* and family *Erwiniaceae* according to Adeolu’s scheme. Members of the family *Erwiniaceae* are Voges–Proskauer (VP) positive and indole negative. Species of *Pantoea* were formerly described under *Enterobacter agglomerans*, *Erwinia herbicola*, or *Tatumella* in earlier classifications [1].

The genus *Pantoea* bears 22 species, with *P. agglomerans* being the most frequently isolated and extensively studied. Although the genus *Pantoea* was established in 1989, *Pantoea septica* was first

described in 2010 by Brady et al. from human stool samples in the USA, making it a recently recognized species [2].

This is an emerging pathogen, although often neglected by being described as a “plant pathogen” or “contaminant.” The routes/sources of *Pantoea* include rice plants, roses, mangoes, strawberries, vegetables, soil, water, fleas, thorns, dust, and cotton in the community, and parenteral nutrition, i.v. fluids (Intravenous fluids), blood products, and toys in playrooms within hospital environments; however, it also has a tendency to colonize the oral cavity and faeces [3].

Pantoea is a group of non-spore-forming, non-capsulated, Gram-negative, facultatively anaerobic, motile bacteria with peritrichous flagella, producing a yellow pigment due to their existence on plant surfaces, which protects the cells from photodamage, with some exceptions [1].

Risk factors for this opportunistic genus include low birth weight and respiratory distress in neonates, as well as malignancy, immunodeficiency disorders, chronic kidney disease (CKD), diabetes, invasive catheters, central lines, occupations such as farming and gardening, and unhygienic personal habits, all of which facilitate transmission and augment pathogenicity in both immunocompromised and immunocompetent patients.

Case reports of *P. agglomerans*, *P. eucrina*, and *P. dispersa* are available; however, to the best of our knowledge, no cases of *P. septica* have been reported from India up to 2026, and only a few reports from abroad have described its isolation from diseases such as bacteraemia, peritonitis, and pulmonary infections in patients with comorbidities and immunodeficiency disorders, in whom it acts as an opportunistic pathogen [4–6]. However, this is the first reported case of *P. septica* bacteraemia in an immunocompetent child from India, highlighting its potential to cause bloodstream infection (BSI) and providing comprehensive laboratory characterization along with its antimicrobial susceptibility profile.

Case presentation

A 1-year-9-month-old male child belonging to a lower socio-economic-class family and residing in a coastal village was brought to the paediatric emergency department with complaints of fever, chills, rigors, cough, and runny nose. The patient was apparently asymptomatic 15 days prior to presentation, after which he developed intermittent fever that was relieved by medication. He also had an acute onset of cough and cold for the preceding 15 days. There was no history of vomiting, loose stools, or convulsions.

A past history of similar complaints was present 2 months earlier, for which he was treated at a peripheral healthcare facility. The child was born by normal vaginal delivery, was fully immunized for age, and was receiving a complementary diet including vegetables, food, and milk. All developmental milestones were age-appropriate and had been attained on time.

On examination, the child was febrile (101.2°F) and alert, with a pulse rate of 130/min, respiratory rate of 24/min, blood pressure of 122/84 mmHg, and SpO_2 of 98% on room air. His build was fair, and no jaundice, edema, or pallor was noted. Abdominal USG (Ultrasonography) was negative for any mass or pathology, and the chest X-ray showed no evidence of pulmonary disease. There was no significant family history, allergy history, or evidence of abrasion or injury on the body. No immunocompromised state, such as diabetes, malignancy, or tuberculosis, was noted.

The paediatricians suspected enteric fever or viral fever as differential diagnoses and initiated symptomatic treatment with injection (inj.) paracetamol, levocetirizine syrup, and salbutamol.

Laboratory tests were otherwise normal except for an increased white blood cell count with lymphocytosis, decreased haemoglobin, negative malarial parasite, normal electrolytes, a negative Widal test, and increased CRP [Table 1]. After 2 days of hospitalization, the patient's condition did not improve; therefore, a set of BC (blood culture) was sent to the microbiology laboratory. Empirical therapy with inj. Ceftriaxone 480 mg iv twice daily was initiated.

Table 1
Laboratory investigation results at presentation

Test	Result	Reference Range	Interpretation
White blood cell count	14,500/mm³	4,000–11,000/mm³	Increased (leucocytosis)
Lymphocyte count	6,200/mm³	1,000–4,000/mm³	Increased (lymphocytosis)
Haemoglobin	9.2 g/dL	12.0–16.0 g/dL	Decreased (anaemia)
Malarial parasite	Not seen	--	Negative
Electrolytes (Na^+)	138 mEq/L	135–145 mEq/L	Normal
Electrolytes (K^+)	4.1 mEq/L	3.5–5.0 mEq/L	Normal
Widal test	Negative	--	Negative
CRP	48 mg/L	< 10 mg/L	Increased

Standard BC bottles containing brain heart infusion (BHI) broth with 0.5% sodium polyanethole sulfonate (SPS) were incubated at 37°C for 7 days and monitored for growth by alternate subcultures on days 1, 3, 5, and 7. No bacterial growth was observed on the first subculture; however, subsequent subcultures demonstrated growth. The isolate produced smooth, yellow-pigmented colonies measuring approximately 2 mm on nutrient agar, while blood agar showed 4–5 mm, moist, non-haemolytic, yellow-pigmented colonies [Figure 1,2]. On MacConkey agar, it produced non-lactose-fermenting, yellow-pigmented colonies measuring 3–4 mm in diameter, which were circular, smooth, convex, and had entire margins [Figure 3]. Gram staining of the culture smear revealed short, plump, Gram-negative bacilli measuring approximately 0.7 × 2 µm, arranged singly or in pairs [Figure 4]. The organism was non-motile, non-capsulated, and non-spore-forming.

Biochemically, the isolate was negative for catalase, oxidase, indole, methyl red, citrate utilisation, phenylpyruvic acid (PPA) production, urease activity, and lysine–arginine–ornithine (LAO) decarboxylase tests, while the Voges–Proskauer test was positive. Triple sugar iron agar showed an acid/acid reaction without gas or hydrogen sulphide production. In Hugh and Leifson's oxidative/fermentative test, the organism demonstrated a fermentative reaction with glucose and was asaccharolytic for lactose. The collective cultural, microscopic, and biochemical characteristics were consistent with the identification of *Pantoea septica*.

Based on the above cultural and biochemical characteristics, the primary suspicion was an organism belonging to the tribe *Klebsiielleae* [Figures 1–4]. However, on further incubation of the culture plates, the appearance of yellow-pigmented colonies drew attention towards *Pantoea* spp. Although rare, the isolate correlated well with the observed phenotypic characteristics. Furthermore, the same organism was isolated from the repeat set of blood cultures, thereby ruling out the possibility of contamination. Accordingly, the report was initially issued as *Pantoea* spp. with antimicrobial susceptibility testing (AST), as shown in Table 2. For species-level confirmation, the isolate was subjected to VITEK-2 and MALDI-TOF MS analysis, which identified it as *Pantoea* spp. with 98% probability and as *P. septica* with a MALDI-TOF score of 1.99, respectively.

Table 2
Antimicrobial susceptibility testing (AST) report

Antimicrobial agents that should be considered for testing and reporting for *Pantoea septica* in Microbiology laboratory	**Zone diameters were interpreted as susceptible (S), intermediate (I), or resistant(R) according to CLSI (Clinical and Laboratory Standards Institute) guidelines for *Enterobacterales* [7].**
Tier 1	
Ampicillin (10 µg)	R
Ceftriaxone (30 µg)	R
Cefotaxime (30 µg)	R
Amoxicillin-clavulanate (20/10 µg)	R
Ampicillin-sulbactam (10/10 µg)	R
Piperacillin-tazobactam (100/10 µg)	R
Gentamicin (10 µg)	S
Ciprofloxacin (5 µg)	S
Levofloxacin (5 µg)	S
Co-trimoxazole [Trimethoprim-sulfamethoxazole] (1.25/23.75 µg)	S
Tier 2	
Cefuroxime (30 µg)	R
Cefepime (30 µg)	S
Ertapenem (10 µg)	S
Imipenem (10 µg)	S
Meropenem (10 µg)	S
Amikacin (30 µg)	S
Tobramicin	S
Cefoxitin (30 µg)	I
Tetracycline (30 µg)	S
Tier 3	
Ceftazidime-avibactam (30/20 µg)	S
Tier 4	
Aztreonam (30 µg)	S

Antimicrobial agents that should be considered for testing and reporting for *Pantoea septica* in Microbiology laboratory	**Zone diameters were interpreted as susceptible (S), intermediate (I), or resistant(R) according to CLSI (Clinical and Laboratory Standards Institute) guidelines for *Enterobacterales* [7].**
Ceftazidime (30 µg)	R
Colistin (by Colistin agar test)	I

After receipt of the culture and AST report, the paediatrician escalated treatment to meropenem 20 mg/kg three times daily. The patient started showing clinical improvement from the following day. Antibiotic therapy was continued for 7 days, following which all symptoms resolved. A follow-up BC was sterile, confirming microbiological clearance of the infection.

Discussion and Conclusions

Table 3
Comparison of reported cases of *Pantoea septica* infection, host immune status, and antimicrobial therapy

Study	**Country of isolation**	**Disease manifestation**	**Immune status**	**Definitive Antimicrobial Therapy**
Present study-2026	India	Bacteraemia	Immunocompetent	Meropenem
Fukunaga S et al. [5]-2026	Japan	Peritonitis in 50-year male (Peritoneal dialysis associated)	Immunocompromised (CKD)	Ceftriaxone
Jayasinghe H et al. [4]-2024	Canada	Bacteraemia in three-month infant	Immunocompromised (Severe combined immunodeficiency disorder present)	Piperacillin-Tazobactam
Kyaw P et al. [6]-2024	USA	Pleuropulmonary infection in 30-year-old man	Immunocompromised (Chronic ketamine user)	Ceftriaxone

BSI/bacteraemia is a life-threatening condition, most commonly caused by Gram-negative bacteria. The major portals of entry include the genitourinary tract (25%), respiratory tract (20%), post-surgical sites and abscesses (15%), and other sources (5%) [8].

Pantoea-associated BSI may be community- or hospital-acquired. Community-acquired cases are linked to vegetative material, penetrating trauma, occupational exposure, and play with contaminated toys, reflecting its ubiquitous nature, whereas hospital-acquired cases are associated with contaminated

medical equipment, i.v. solutions, blood products, and healthcare workers' hands [9, 10]. Outbreaks have also been reported, including those causing neonatal deaths [11].

The genus name *Pantoea* (“of all sorts and sources”) reflects its ability to colonize diverse habitats. Notably, *P. septica* has been isolated from metal and plastic surfaces. The species epithet *septica* highlights its association with putrefaction and septicaemia outbreak-related strains [12].

How did this patient get infected?

The patient's residence in a coastal rural area, low socioeconomic status, poor personal hygiene, frequent exposure to contaminated toys, and possible ingestion of contaminated fruits and vegetables from a cotton-farming environment may have facilitated colonization by *P. septica* in the upper respiratory tract, gastrointestinal tract, skin, and hands.

The child had involvement of two systems: upper respiratory tract infection (URTI) and BSI. The respiratory illness may have resulted from exposure to contaminated medical equipment, such as a nebulizer used during a previous illness, chronic exposure to cotton dust due to residence in a cotton-farming environment, and the patient's young age, which is associated with relatively immature immune responses compared with adults. These factors may have contributed to URTI. A case reported by Kyaw et al. also demonstrated respiratory system involvement by *P. septica* [6] [Table 3]. Following inhalation, endotoxins may trigger mucosal inflammation through macrophage activation and the release of cytokines and other inflammatory mediators. Notably, *P. agglomerans* has also been implicated in cotton fever [13].

Chronic untreated or recurrent respiratory symptoms, together with lower gastric acidity in children, poor personal hygiene, and food- or water-borne contamination, may have promoted gastrointestinal colonization, mucosal injury, and subsequent translocation of the organism into the bloodstream, resulting in bacteraemia. A similar mechanism has been proposed for *P. agglomerans* [9]. Following entry into the bloodstream, the organism may exert pathogenic effects through virulence factors such as enzymes, the type IV secretion system, flagella, and chemotactic proteins [12]. Besides ingestion, *Pantoea* spp. may also cause BSI through wound infections, trauma, or sporadic acquisition.

Despite chronic symptoms, the favourable clinical response suggests relatively low virulence of the *P. septica* strain. However, *P. septica* has also been associated with wound infections, conjunctivitis, and febrile neutropenia [11]. Hence, it should be considered when identified from blood, pus aspirates, wound swabs, and device-related clinical specimens.

Diagnostic Challenges and Laboratory Identification of *P. septica*:

The biochemical profile of *Pantoea* closely resembles that of the tribe *Klebsielleae* (*Klebsiella*, *Enterobacter*, *Hafnia*, and *Serratia*), making identification difficult in laboratories without automated systems. Therefore, vigilance is essential. Isolates that are MR-negative, VP-positive, and non-lactose fermenting, but do not fit the biochemical profile of *Klebsiella* or *Enterobacter*, should be incubated at

25°C to enhance pigment production. Pigment formation on routine media, lack of lactose fermentation, and a triple-negative LAO test are key clues for manual identification.

This was a slow-growing strain that was not recovered on the first subculture from the blood culture bottle, highlighting the importance of maintaining blood culture incubation for up to 7 days. Initially, *P. agglomerans* was suspected; however, for confirmation, the isolate was sent to another laboratory for identification by VITEK 2, which identified *Pantoea* spp. with 98% probability. As species-level identification was not achieved and *P. agglomerans* could not be confirmed, the isolate was subsequently referred to a reference laboratory, where MALDI-TOF MS identified *P. septica* with a score of 1.99. Similarly, Jayasinghe et al. reported identification of *P. septica* by MALDI-TOF MS with a score of 2.41 [4]. Unlike VITEK 2, which may fail to identify or misidentify non-*agglomerans Pantoea* species, *P. septica* is included in MALDI-TOF databases, making it a reliable tool for differentiating *P. septica* from *P. agglomerans* [4, 11].

Conventional methods cannot reliably differentiate *P. septica* from *P. agglomerans*. *P. agglomerans* is typically motile and PPA-negative, but non-motile, lactose-fermenting variants occur; *P. septica* can show weak PPA positivity [14]. Therefore, MALDI-TOF MS remains the preferred method for accurate species-level identification and differentiation.

Antimicrobial Resistance and Therapeutic Considerations in *P. septica* Infection:

CLSI has not established organism-specific AST breakpoints for *Pantoea* spp.; therefore, *Enterobacterales* breakpoints are generally extrapolated for interpretation, as evidenced by the favourable clinical outcome in the present case. The isolate was resistant to ampicillin, third-generation cephalosporins, and older β-lactam/β-lactamase inhibitor (BLBLI) combinations, showed intermediate susceptibility to cefoxitin, and remained susceptible to cefepime and newer BLBLI combinations. This susceptibility pattern is suggestive of AmpC β-lactamase production and is similar to that reported by Fukunaga et al. [5].

Likewise, Jayasinghe et al. reported reduced susceptibility of *P. septica* to ampicillin and cefoxitin [4]. In contrast, Kyaw et al. documented successful treatment with ceftriaxone [6]. In the present case, therapy was escalated to a carbapenem following AST results, resulting in clinical recovery. However, the presence of resistance genes such as *bla*CTX-M-15 and *bla*TEM-1D in *Pantoea* spp., and efflux pumps with ATP-binding cassettes, may contribute to the future emergence and dissemination of antimicrobial resistance [5, 15]. Furthermore, reports of carbapenem-resistant *P. agglomerans* highlight the potential for resistance evolution within the genus [9].

This “friend and foe” bacterium represents a double-edged sword. *Pantoea* spp. possess several beneficial properties, including potential applications in melanoma therapy, biosurfactant production, biocontrol, immunomodulation, anticancer activity, and food preservation [3, 9]. However, once introduced into the human body, they may also act as opportunistic pathogens and cause a spectrum of

infections. Therefore, enhanced surveillance of *Pantoea* spp. and products containing their extracts is warranted to ensure safety and to better understand their clinical implications.

This report represents the first documented case from India and expands the limited global literature on the clinical spectrum of *P. septica*. It is important to keep in mind the versatile nature of this species and that it should not be neglected even if isolated from an immunocompetent patient. Although the intrinsic resistance of *Pantoea* is yet to be determined, this drug-resistant, particularly environmental pathogen highlights the importance of periodic surveillance, stringent sorting and cleaning measures in industry and agriculture, and ecological strategies to augment infection control activities and occupational safety. The organism poses diagnostic challenges due to its phenotypic resemblance to members of the tribe *Klebsielleae* and the limitations of conventional identification methods. MALDI-TOF MS remains the most reliable tool for accurate species-level identification rather than VITEK. The observed antimicrobial susceptibility profile suggests potential AmpC-mediated resistance and underscores the importance of performing AST for appropriate therapeutic guidance. Given its association with the environment, animals, and humans, a One Health approach with stewardship is necessary to prevent future resistance, especially in the tropics. Future research in point-of-care tests, molecular testing innovation, and sequencing is necessary to better understand the characteristics of *P. septica*.

Abbreviations

Abbreviation
Full Form
AST
Antimicrobial Susceptibility Testing
BA
Blood Agar
BC
Blood Culture
BHI
Brain Heart Infusion
BLBLI
β-Lactam/β-Lactamase Inhibitor
BSI
Bloodstream Infection
CKD
Chronic Kidney Disease
CLSI
Clinical and Laboratory Standards Institute
CRP
C-Reactive Protein
i.v.

Intravenous
LAO
Lysine–Arginine–Ornithine Decarboxylase Test
Mac
MacConkey Agar
MALDI-TOF MS
Matrix-Assisted Laser Desorption/Ionization Time-of-Flight Mass Spectrometry
MR
Methyl Red
NA
Nutrient Agar
O/F
Oxidative/Fermentative
PPA
Phenylpyruvic Acid
SpO_2
Peripheral Oxygen Saturation
SPS
Sodium Polyanethole Sulfonate
TSI
Triple Sugar Iron
URTI
Upper Respiratory Tract Infection
USG
Ultrasonography
VP
Voges–Proskauer
WBC
White Blood Cell

Declarations

Ethics and Consent to Participate declarations

not applicable

Consent to Publish

declaration: Written informed consent for publication of this case report and the associated clinical details was obtained from the patient's parents/legal guardians. No identifiable patient images are

included in this manuscript. A copy of the written informed consent is available for review by the Editor-in-Chief of this journal.

Competing Interests

The authors declare that they have no competing interests.

Funding

The authors received no financial support, grants, or funding from any agency in the public, commercial, or not-for-profit sectors for the conduct of this study.

Author Contribution

Authors' Contributions• Dr. Gaurav Chotaliya: Conceptualization, literature review, microbiological investigations, data collection and analysis, interpretation of findings, manuscript drafting, and final revision of the manuscript.• Dr. Krunal Mehta: Clinical supervision, interpretation of findings, and critical revision of the manuscript.• Dr. Pushpa Kateshiya: Study supervision, manuscript review, and final approval of the manuscript.• Bhoomika Joshi: Literature review, data collection, manuscript drafting, and critical revision.• Harmika Parmar: Data collection, literature review, manuscript drafting, and manuscript editing.

Acknowledgements

The authors sincerely thank almighty the staff of the Department of Microbiology, Shri M.P. Shah Government Medical College, Jamnagar, Gujarat, India for their support in the diagnosis and management of this case.

Availability of Data and Materials

All data generated or analysed during this study are included in this published article. Additional information is available from the corresponding author upon reasonable request.

References

1. Sastry ASSD. Essentials of Microbiology for Postgraduates: Systematic Bacteriology. 1st ed. New Delhi: Jaypee Brothers Medical Publishers (P) Ltd.
2. Lo CI, Padhmanabhan R, Mediannikov O, Nguyen TT, Raoult D, Fournier P-E et al. Genome sequence and description of Pantoea septica strain FF5. Stand in Genomic Sci [Internet]. 2015 [cited 2026

June 2];10:103. https://doi.org/10.1186/s40793-015-0083-0

3. Shelke DY, Bankar DN, Nakate DP, Patil DSN et al. THE PANTOEA SPECIES: AN EMERGING HUMAN PATHOGEN OF CONCERN. In: Maurya DrR, Chakrabarti DrI, Neelima Dr, Sneha Mrs, Govind DrS, Ramayanam DrNR, editors. IIP Series [Internet]. Iterative International Publishers (IIP); 2023 [cited 2026 June 2]. pp. 1–7. https://doi.org/10.58532/V3BDMS3P1CH1
4. Jayasinghe H, Lee SJ, Adam H, Karlowsky J, Zhanel GG, Walkty A. Pantoea septica bacteremia in a 3-month-old infant with RAG2 severe combined immune deficiency: A case report. Diagn Microbiol Infect Disease [Internet]. 2024;110:116499. https://doi.org/10.1016/j.diagmicrobio.2024.116499. [cited 2026 June 2];.
5. Fukunaga S, Masuda N, Nakashima D, Oba R, Furuya M, Kidoguchi S, et al. Pantoea septica-associated peritoneal dialysis-related peritonitis: first case report. Ren Replace Ther [Internet]. 2026;12:18. https://doi.org/10.1186/s41100-026-00715-1. [cited 2026 June 2];.
6. Kyaw P, Sharma NR, Soe K, Lin YS, Sharma S, Unexpected Culprit. A Case Report of Pleuropulmonary Pantoea septica Infection in a Ketamine User. Cureus [Internet]. 2024. https://doi.org/10.7759/cureus.65597. [cited 2026 June 2].
7. CLSI. Performance Standards for Antimicrobial Susceptibility Testing. CLSI supplement M100. 36th edition. Clinical and Laboratory Standards Institute; 2026.
8. Tille PM. Bailey & Scott's diagnostic microbiology. Thirteenth edition. St. Louis, Missouri: Elsevier; 2014.
9. Büyükcam A, Tuncer Ö, Gür D, Sancak B, Ceyhan M, Cengiz AB, et al. Clinical and microbiological characteristics of Pantoea agglomerans infection in children. J Infect Public Health [Internet]. 2018;11:304–9. https://doi.org/10.1016/j.jiph.2017.07.020. [cited 2026 June 2];.
10. Masoud SS, Majigo M, Gangji RR, Nyawale H, Ntukula A, Msafiri F et al. Occurrence of Pantoea agglomerans bloodstream infection in neonatal intensive care unit at tertiary hospital in Tanzania: antibiotic susceptibility profile and clinical outcome. Bull Natl Res Cent [Internet]. 2024 [cited 2026 June 2];48:52. https://doi.org/10.1186/s42269-024-01210-5
11. Soutar CD, Stavrinides J. Molecular validation of clinical Pantoea isolates identified by MALDI-TOF. Morais PV, editor. PLoS ONE [Internet]. 2019 [cited 2026 June 2];14:e0224731. https://doi.org/10.1371/journal.pone.0224731
12. Crosby KC, Rojas M, Sharma P, Johnson MA, Mazloom R, Kvitko BH et al. Genomic delineation and description of species and within-species lineages in the genus Pantoea. Front Microbiol [Internet]. 2023 [cited 2026 June 6];14:1254999. https://doi.org/10.3389/fmicb.2023.1254999
13. Penner M, Romans B, Tah L, Argubright B, Strohmeyer M. Successful Treatment of Pantoea agglomerans Bacteremia Using Oral Antibiotics. Bush LM, editor. Case Reports in Infectious Diseases [Internet]. 2022 [cited 2026 June 7];2022:1–3. https://doi.org/10.1155/2022/6136265
14. Brady CL, Cleenwerck I, Venter SN, Engelbeen K, De Vos P, Coutinho TA et al. Emended description of the genus Pantoea, description of four species from human clinical samples, Pantoea septica sp. nov., Pantoea eucrina sp. nov., Pantoea brenneri sp. nov. and Pantoea conspicua sp. nov., and

transfer of Pectobacterium cypripedii (Hori 1911) Brenner 1973 emend. Hauben 1998 to the genus as Pantoea cypripedii comb. nov. International Journal of Systematic and Evolutionary Microbiology [Internet]. 2010 [cited 2026 June 6];60:2430–40. https://doi.org/10.1099/ijs.0.017301-0

15. Ghaly M, Zakala A, Penmethsa K, Johnson-Pich KD. A Rare Organism Causing Cholecystitis With Bacteremia in a Breast Cancer Patient. Cureus [Internet]. 2024 [cited 2026 June 7]; https://doi.org/10.7759/cureus.54549

Figures

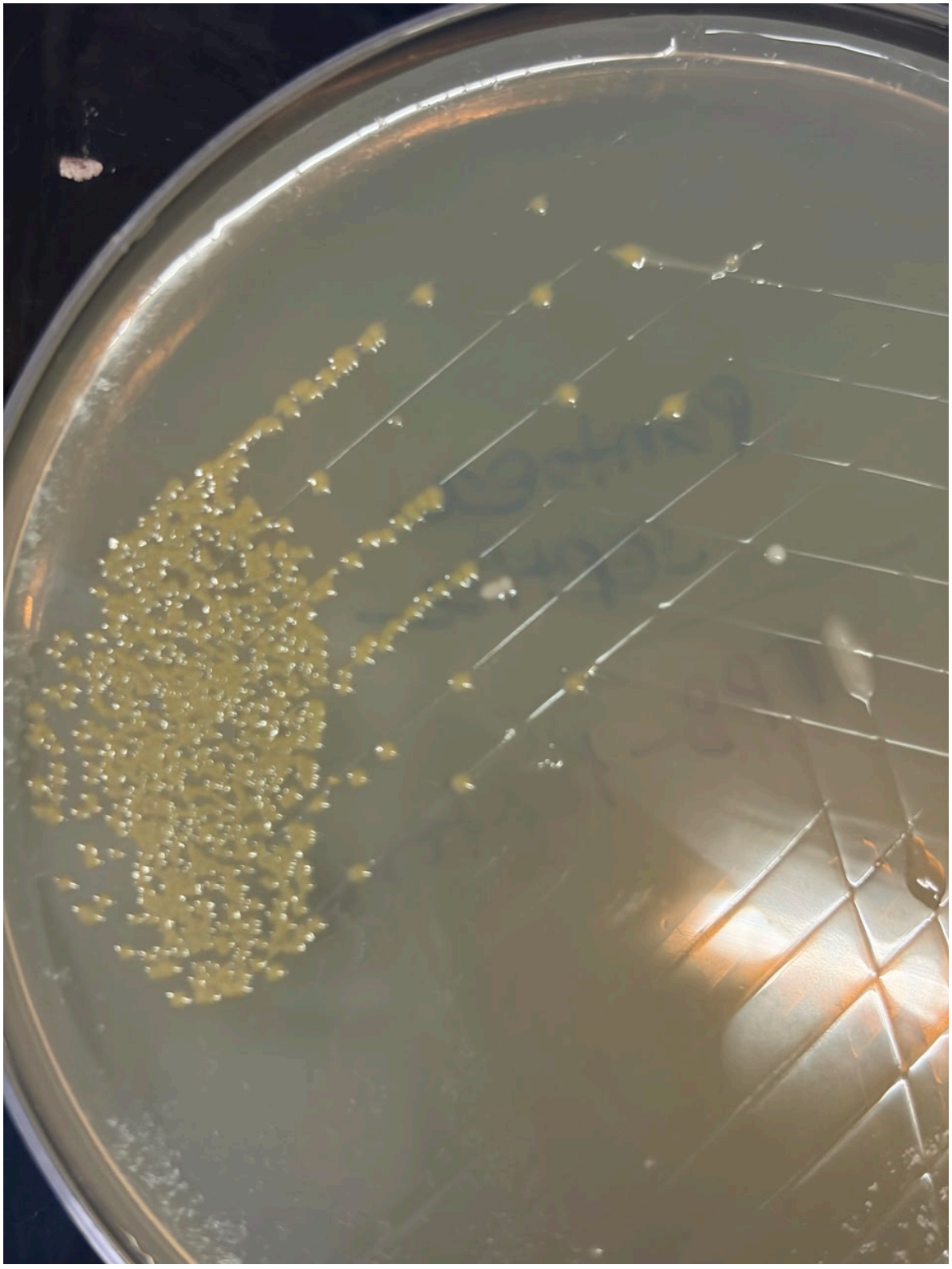


Figure 1

Colony morphology on nutrient agar showing glistening, yellow-pigmented colonies arranged along the streak lines.

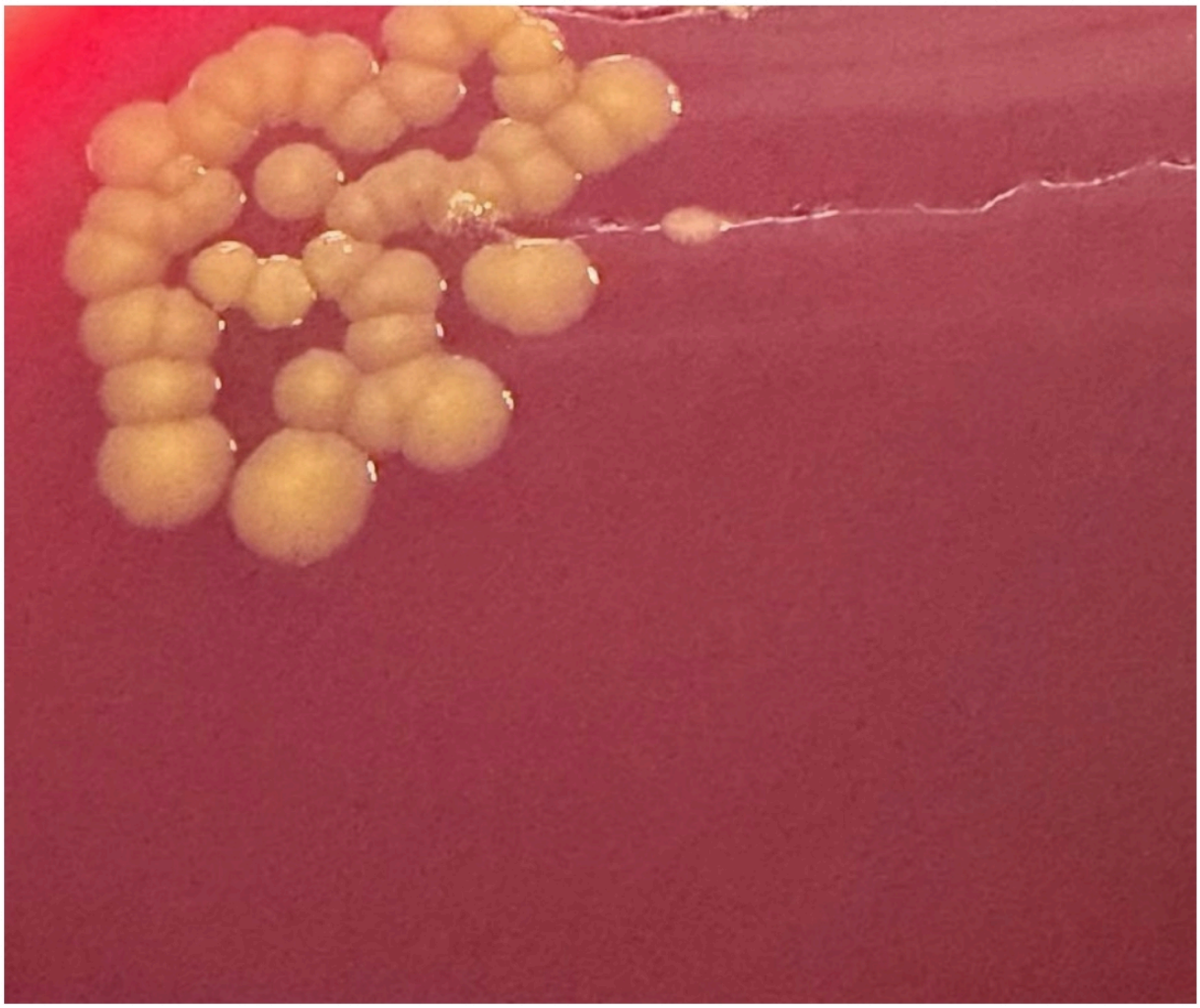


Figure 2

Zoomed view of colony morphology on blood agar showing moist, circular, non-haemolytic, cream-to-yellow pigmented colonies measuring approximately 4–5 mm in diameter.

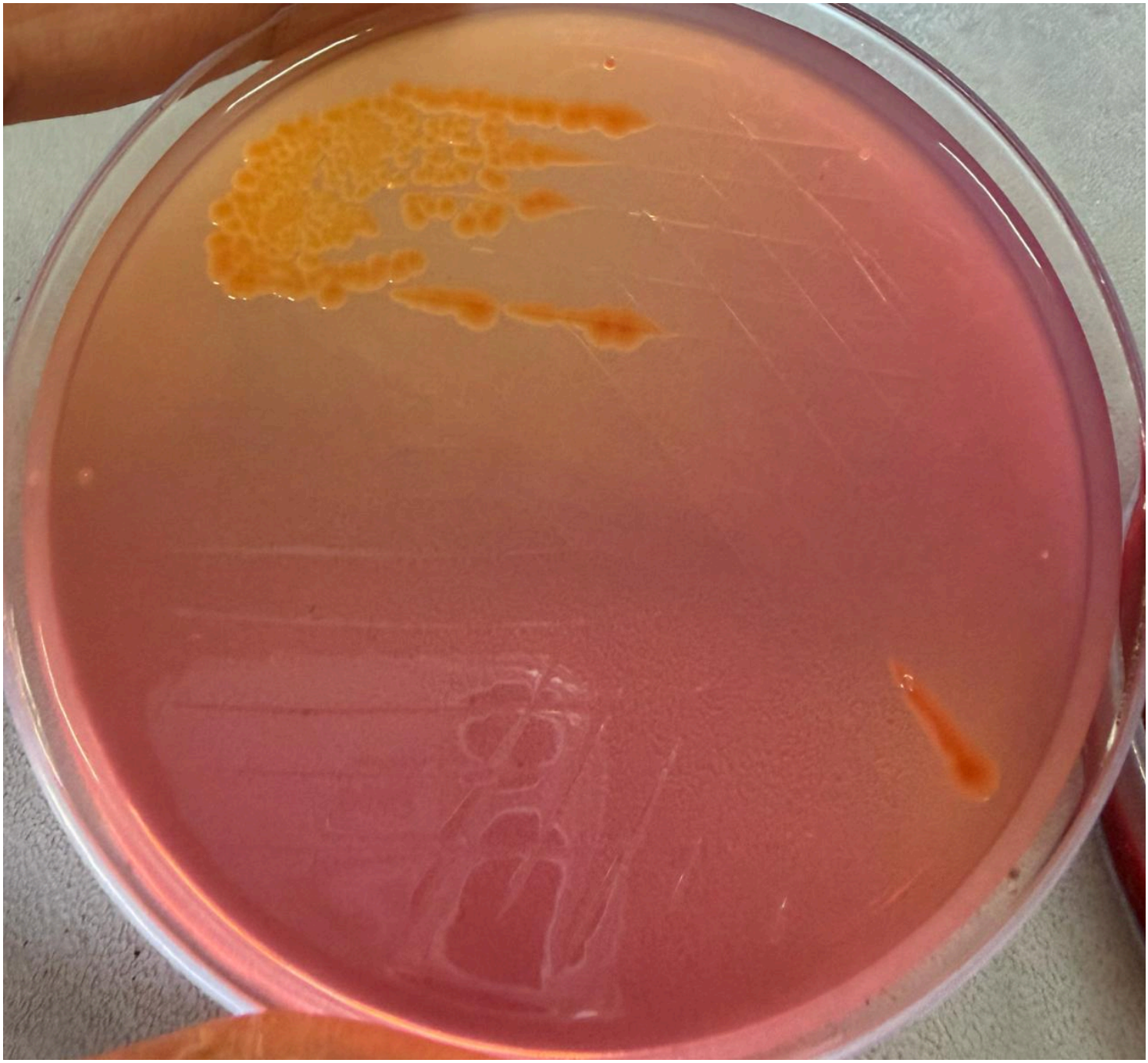


Figure 3

Growth of the *Pantoea septica* isolate on MacConkey agar demonstrating non-lactose-fermenting colonies with distinct yellow pigmentation.

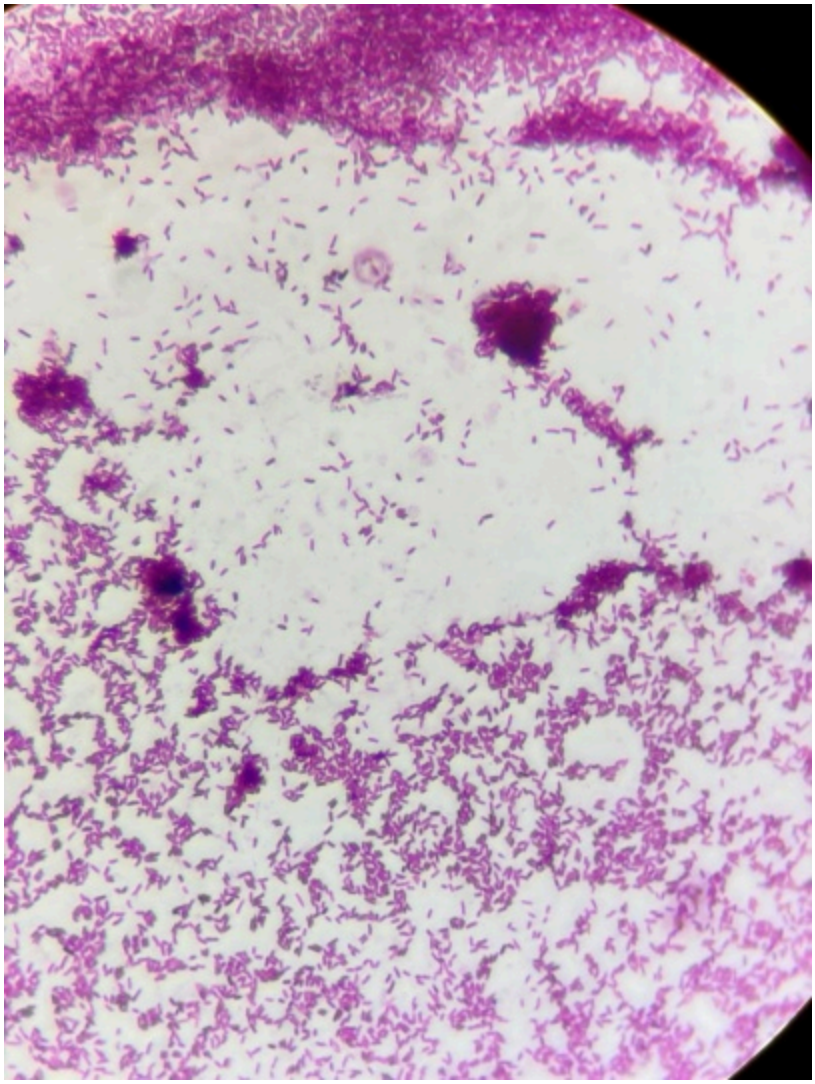


Figure 4

Gram-stained smear of the *Pantoea septica* isolate demonstrating short, plump, Gram-negative bacilli arranged singly and in pairs, as observed under oil immersion microscopy (1000× magnification).