

## O. Anthropi: An Unusual Cause of Pneumonia and Bacteremia

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### Background

- Ochrobactrum Anthropi spp. is a class of non-enteric, aerobic gram-negative bacillus with expanding virulence potential as an opportunistic human pathogen in both immunocompetent and immunocompromised hosts throughout the world observed in both pneumonia and bacteremia cases with increasing frequency.

### Case Description

- A 66-year-old male with a medical history significant for Chronic Kidney Disease (CKD) with unknown baseline Cr and polysubstance abuse presented after being found unconscious for an unknown duration of time with concern for rhabdomyolysis necessitating dialysis and suspected gastrointestinal bleeding.
- Patient experienced a **complicated hospital course including cardiopulmonary arrest with return of spontaneous circulation after one round of compressions**, however, due to persistent debility patient **necessitated permanent dialysis catheter placement, tracheostomy, indwelling foley as well as gastrostomy placement during hospitalization.**
- Once patient was stabilized, he was subsequently transferred to a long-term acute care hospital (LTAC) where he developed significant leukocytosis with positive culture findings for tracheitis due to isolation of Ochrobactrum Anthropi in both blood and sputum cultures that were sensitive to ciprofloxacin, meropenem, tobramycin and trimethoprim/sulfa, and resistant to aztreonam, piperacillin-tazobactam and cephalosporins.

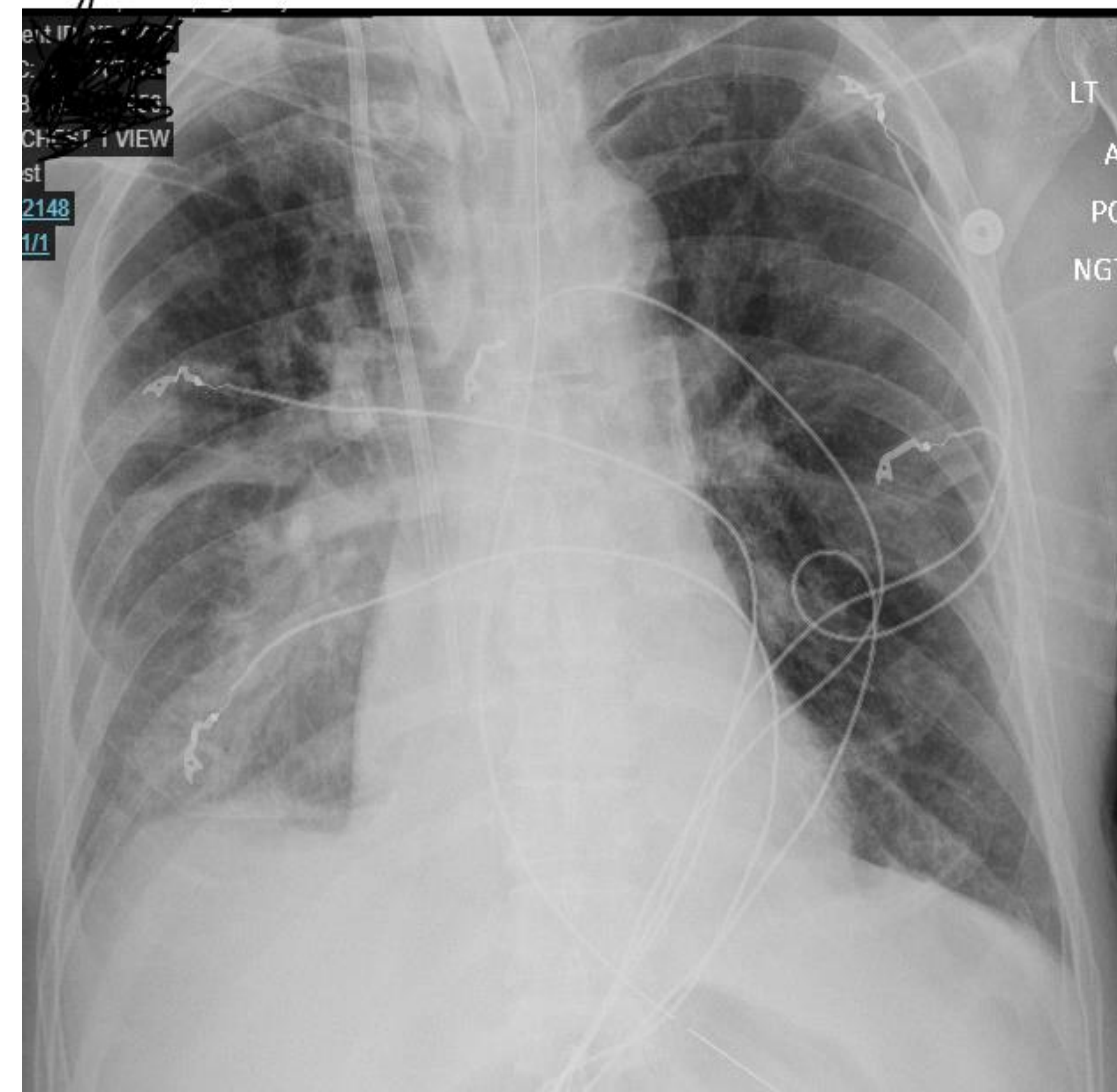
### Physical exam:

- Vitals: T=37.5, HR=97, BP=109/76, RR=19
- General: Patient looked ill and unwell.
- HEENT: Oropharynx slightly dry, no exudate, dentition.
- Cardiovascular: Slightly tachycardic with trace bilateral lower extremity edema
- Pulmonary: Unlabored, coarse breath sounds heard throughout

### Lab Results

**WBC:** 29,000  
**Hgb:** 18  
**Hct:** 27  
**Platelets:** 89  
**Chem 7:** Significant for elevated Cr at 2.0

### Imaging



- Chest x-ray demonstrated bilateral lung opacifications and blood cultures later grew *Streptococcus constellatus*.
- Findings were consistent with suspected Pneumonia

### Discussion

- Ochrobactrum spp is an exceptionally rare bacteria which belongs to the class Brucellaceae. The word "Ochros" is a Greek word that means pale yellow, which is a characteristic color of Ochrobactrum colonies. Previously known as "acromobacter group Vd" Ochrobactrum Anthropi is an opportunistic gram negative, aerobic, oxidase positive, mobile non lactose fermenting bacillus
- Ochrobactrum genus is almost completely resistant to B-Lactam antibiotics such as penicillin's and cephalosporins [2,9]. Resistance to other classes of antibiotics are more specific to certain species of Ochrobactrum Anthropi study done on 130 Ochrobactrum genomes showed all species in the genus has B lactam resistance through an "AmpC phenotype"
- Most patients recover well with proper diagnosis and treatment, but left untreated the prognosis is very poor.

### Conclusion

- Ochrobactrum spp. as described in the literature are not currently considered as major pathogens for nosocomial infections and are thought to be relatively innocuous when compared to other bacterial organisms, however, increased prevalence of infections Ochrobactrum Anthropi as evidenced by our literature review and case report dictate that this bacteria should remain on the differential as a possible causative nosocomial organism in cases of pneumonia and bacteremia in both immunocompromised and immunocompetent hosts.

### References

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