

Inappropriate diagnosis and antibiotic prescribing for urinary tract infections in older adults: Perspectives of healthcare staff and patients

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Background

- Urinary tract infections are the second biggest source of antibiotic prescribing in the UK healthcare
- It is estimated that 40% of cases of UTI in older adults are incorrectly diagnosed, fuelling antimicrobial resistance in the patients and the community¹
- In particular, asymptomatic bacteriuria (ASB) is common in older adults and should not be treated with antibiotics²,
- A recent qualitative study on why junior doctors in a Swiss hospital treat ASB showed that they often overrelied on laboratory results, were anxious about poor outcomes, felt pressured by peers and patients to prescribe and found it difficult to interpret symptoms of UTIs³
- There are no studies on different staff groups' and older adult patients' experiences of UTI diagnosis in hospitals

Aims

We explored the interplay of doctors, nurses and patients in the processes that may lead to inappropriate diagnosis and antibiotics overprescribing for urinary tract infections in older adults in hospitals.

Methods

- Qualitative interviews with healthcare staff (nurses, doctors, healthcare assistants, microbiologists) and older adult patients diagnosed with a UTI (total n=41)
- Participants recruited from different wards (acute, older adults, orthopaedics, stroke) in a large teaching hospital and two community hospitals in UK Midlands
- Interviews were analysed for recurrent themes
- Ethical approval obtained from the NHS HRA (IRAS reference 202255)

'In an older person, we've labelled a UTI, but we don't really know whether it's the urine infection that's causing all the problems. And they move to the wards, and they stay for a couple of days or sometimes even weeks. So, we don't know whether the antibiotic we give worked or not, if it was a UTI, and that's cured it or not' (Participant 24, doctor, acute care).

Results

- We identified 4 themes:
- Interpreting UTI symptoms:
 - Clinicians sought to *listen* to older patients
 - However, clinicians frequently resorted to *observing* general symptoms, such as confusion or deterioration
 - Patients interviewed often recalled having--or not having--UTI symptoms, such as pain
- Urinalysis
 - Nurses used and trusted the urinary dipstick
 - Doctors used but doubted dipsticks; they often knew ASB should not be treated but prescribed antibiotics if bacteria found in a culture without symptoms, fearing it could develop into a problem later
 - Patients considered finding *a bug* to confirm UTI
- Treatment and recovery
 - Many nurses considered UTIs fairly straightforward to identify and treat
 - Doctors were often concerned about incorrect diagnosis and loss of patients to follow-up
 - Interviewed patients had often experienced repeated UTI diagnoses and courses of antibiotics in a complex health context



Discussion

Clinicians often resort to diagnosing UTIs based on general outward signs, such as confusion; our interviews suggest that some older adults would be able to describe specific symptoms, such as pain. Nurses often perceived diagnosis of UTIs as unproblematic, doctors were often concerned about overdiagnosis but continued to treat ASB, as they saw bacteria as always potentially dangerous. Patients deferred to clinicians, and repeated UTI diagnoses and treatment were overshadowed by complex health problems.

Conclusion

- **Listening to patients' specific symptoms key in diagnosing UTIs in the elderly**
- **Nurses have a crucial role in diagnosis and would benefit from education about not treating asymptomatic bacteriuria (ASB) in the elderly**
- **Doctors often aware of overdiagnosis and recommendations but keep treating ASB, as they have no alternative understanding of bacteria other than harmful**
- **Older patients may be repeatedly diagnosed with UTIs and treated with antibiotics in a complex health situation.**

References

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