A single-centre Outpatient Parenteral Antimicrobial Therapy (OPAT) management experience over 18 months for severe pelvic inflammatory disease

K O'Brien [1], A Delmonte Sen [1,4], A O'Neill [2], A DeMaio[2], P Govender[3], M Brassil[3], S Maher[2], S Waqas [1,4]

Departments of 1. Infectious Diseases2. Gynaecology and 3. Radiology, Tallaght University Hospital 4: Clinical Medicine TUH, School of Medicine, Trinity College Dublin, Dublin, Ireland.

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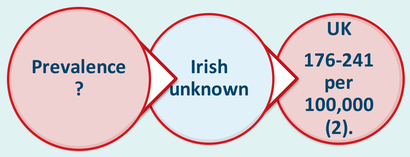
Background

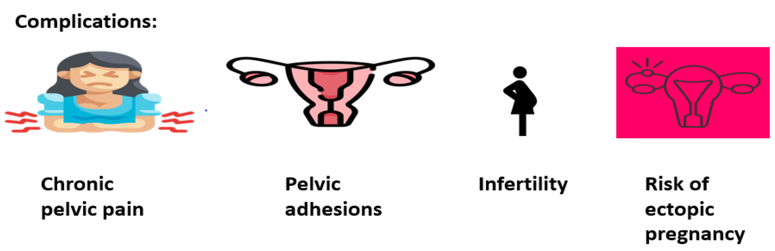
PID is a clinical syndrome defined by inflammation of the upper genital tract in females.

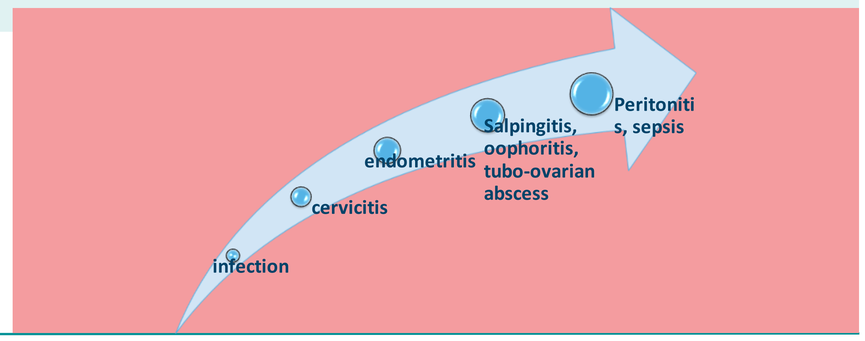
HSE guidelines advise that all patients admitted with PID should be screened for sexually transmitted infections including *Neisseria gonorrhoea, Chlamydia trachomatis, Mycoplasma genitalium,* and serum testing for HIV, syphilis and hepatitis B (1).

CDC, BASHH guidelines and HSE recommend a single dose ceftriaxone, followed by 2 weeks of oral doxycycline and metronidazole (2,3). No differentiation in guidelines between mild, moderate or severe disease presentation and its impact on duration of antibiotics.

BASHH guidelines recommend laparoscopic surgical management for adhesions or radiologically guided drainage of pelvic abscesses where possible (3).







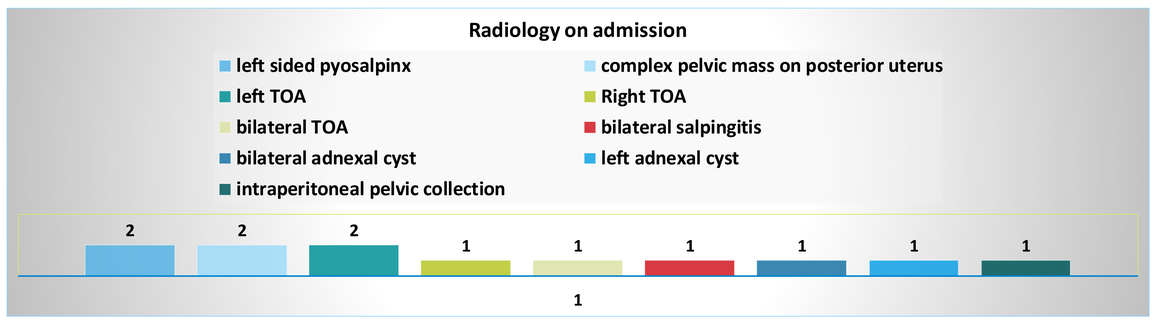
Methodology

The study assessed management of severe PID patients discharged on OPAT from Tallaght Hospital (July 2022 - Dec 2023). Approved by the institution's ethics department, it aimed to compare management based on BASSH, HSE, and CDC guidelines regarding diagnostic tests, antimicrobials, abscess management, and post-OPAT re-imaging.

Results

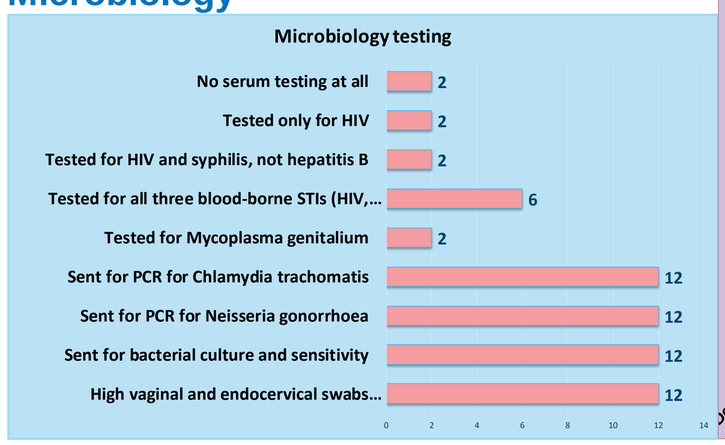
12 patients. The age range between 18 to 76 with a median of 37 and a mean of 39. Six (50%) patients were nulliparous, One (8%) with parity of 1, Two (16%) patients had a parity of 2, One (8%) had parity of 3, One (8%) had parity of 4 and one (8%) had parity of 5. Comorbidities of endometriosis or diverticulosis were also examined. Three (25%) had a diagnosis of endometriosis, and two out of the twelve patients (16%) had diverticulosis.

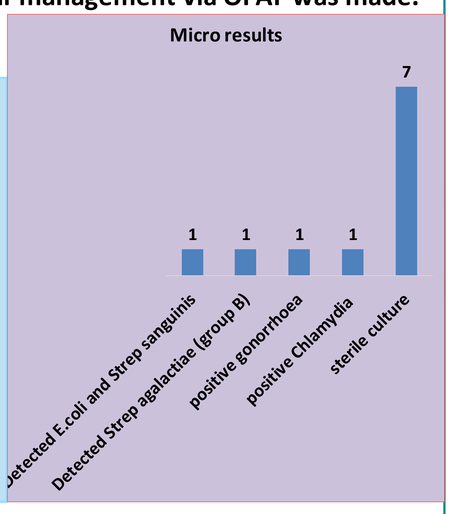
Radiological evidence of PID



The collections' diameter varied from 3cm to 19cm, majority of these were multiloculated and after MDT discussion decision for conservative antimicrobial management via OPAT was made.

Microbiology





Add on testing was sent for patients who had serum samples taken already to test for syphilis and hepatitis. The 2 patients who had no serum testing were referred to their GP for screening. All blood borne virus tests were negative. All patients who tested positive for STI were referred to genitourinary medicine for partner testing and test of cure.

Interventions during admission

1 patient → 13.9cm multiloculated cystic mass involving bilateral adnexa → IR, sterile culture → Discharged on OPAT

OPAT course

100% ceftriaxone IV doxycline, metronidazole PO → 100% weekly OPAT clinic review with bloods → 92% 6 week antibiotic duration → 100% re-imaging at end of course

Patient outcomes

- The 3 patients received drainage via IR, the sizes of their collections were 6.8cm, 19cm and 10cm, all of which were increased compared to previous scans.
- 1 patient had positive microbiology cultured from the drain fluid, growing *Staphylococcus warneri and Staphylococcus pasteuri.* All four patients continued OPAT post re-admission and were discharged successfully.

Conclusion:

- Feasibility and effectiveness of OPAT in managing severe PID.
- Severe PID can be managed conservatively in a supervised, multidisciplinary setting with an individualised approach.
- Study limitations; small sample size, retrospective analysis.
- Repeat imaging prior to the cessation of OPAT therapy for the twelve patients with severe PID allowed radiological reassessment and enabled extension of their antibiotic therapy as necessary, thus preventing readmission.
- Lack of clear national guidelines around antibiotic duration and the use of parenteral vs oral in the case of tubo-ovarian abscesses.
- OPAT offers benefits to the patient by allowing them to return to their normal lives and economic benefits by reducing hospitalization costs.
- Further research into this area will add to the literature and inform practise for improved care into this complex medical cohort

Author email: obriek18@tcd.ie

Tallaght University Hospital

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2. *Pelvic inflammatory disease (PID) - STI treatment guidelines* (2022) *Centers for Disease Control and Prevention*. Available at: https://www.cdc.gov/std/treatment-guidelines/pid.htm (Accessed: 12 January 2024).
3. (No date) *BASHH guidelines*. Available at: https://www.bashhguidelines.org/current-guidelines/systemic-presentation-and-complications/pid-2019/ (Accessed: 12 January 2024).

'4. images available from: Flaticon.com

**HSE; Health service executive. BASHH; British association of sexual health and HIV. CDC; centre for disease and control. STI sexually transmitted infection. GP general practitioner. IR interventional radiology . TOA tubo-ovarian abscess.