

Guidelines on the Management of Actinomyces-Like Organisms (ALOs) on Smears in Patients with Intrauterine Contraception

A Clinical Guideline

For Use in:	Gynaecology Services
By:	Gynaecologists, GPs, nurses
For:	Management of ALOs on smears in patients with IUDs
Division responsible for document:	Women / Children
Key words:	Actinomyces-like organisms, ALOs, intrauterine contraception, IUC, management
Name and job title of document author's:	Saadia Naeem, Consultant Gynaecologist Catherine Schunmann, Consultant in Sexual and Reproductive Health
Name and job title of document author's Line Manager:	Jo Nieto, Chief of Service, Gynaecology Dr Nelson David, Consultant GUM and HIV Physician and Clinical Director of iCaSH Norfolk.
Supported by:	Catherine Tremlett, Consultant Microbiologist
Assessed and approved by the:	Gynaecology Guidelines Committee
Date of approval:	24/01/2021
Ratified by or reported as approved to (if applicable):	Clinical Safety and Effectiveness Sub-board
To be reviewed before: This document remains current after this date but will be under review	24/01/2025
To be reviewed by:	Catherine Schunmann
Reference and / or Trust Docs ID No:	756
Version No:	4
Compliance links: (is there any NICE related to guidance)	None
If Yes - does the strategy/policy deviate from the recommendations of NICE? If so why?	N/A

This guideline has been approved by the Trust's Clinical Guidelines Assessment Panel as an aid to the diagnosis and management of relevant patients and clinical circumstances. Not every patient or situation fits neatly into a standard guideline scenario and the guideline must be interpreted and applied in practice in the light of prevailing clinical circumstances, the diagnostic and treatment options available and the professional judgement, knowledge and expertise of relevant clinicians. It is advised that the rationale for any departure from relevant guidance should be documented in the patient's case notes.

The Trust's guidelines are made publicly available as part of the collective endeavour to continuously improve the quality of healthcare through sharing medical experience and knowledge. The Trust accepts no responsibility for any misunderstanding or misapplication of this document.

Guidelines on the Management of Actinomyces-Like Organisms (AIOs) on Smears in Patients with Intrauterine Contraception

Version and Document Control:

Version Number	Date of Update	Change Description	Author
4	21/01/2021	Title amended, IUD amended to IUC and references updated	Authors

This is a Controlled Document

Printed copies of this document may not be up to date. Please check the hospital intranet for the latest version and destroy all previous versions.

Guidelines on the Management of Actinomyces-Like Organisms (ALOs) on Smears in Patients with Intrauterine Contraception

Actinomycetes are gram positive, anaerobic commensal bacteria found in the gastrointestinal and genital tracts.^{1,2} They are commonly found in the female genital tract in women with and without intrauterine contraception (IUC).³

1. They exhibit low virulence and require a breach in the integrity of the mucous membrane and the presence of devitalised tissue to become pathogenic. Actinomycosis is frequently thought to be a polymicrobial infection with as many as 5 – 10 species isolated from affected tissues.² These “co-pathogens” may act to enhance the otherwise low invasiveness of actinomycetes, allowing penetration to deeper tissues.
2. Abdominal and pelvic actinomycosis are the least common sites of infection (10-20%) followed by thoracic (15-20%) with the most commonly affected area being craniofacial (50-70%). Once established, infection can spread invasively creating a suppurative and granulomatous abscess which commonly mimics malignancy or tuberculosis. Diagnosis of actinomycosis requires aspiration of material from deep tissues or sinuses followed by rapid transit to a laboratory in anaerobic conditions for culture and identification. Treatment is usually with parenteral penicillin and a multidisciplinary clinical and microbiological approach ensures optimal dosage and duration of antimicrobial regimes.²
3. Actinomycosis is an extremely rare condition. An estimate of annual incidence in one American study was approximately 1:300,000. In another review, the prevalence of pelvic actinomycosis was found to be 1 in 126,313 female patients discharged from 6 hospitals between 1983 and 1997.⁴
4. In contrast, up to 30% of cervical smears of intrauterine device users may be positive for actinomyces-like organisms (ALOs) with slightly lower rates found in women with levonorgestrel releasing systems.⁵
5. The relationship between the presence of ALOs seen on smears and the eventual development of pelvic actinomycosis is unclear. Because of its lack of sensitivity and specificity and low positive predictive value, the prognostic significance of detecting ALOs is minimal in the absence of symptoms.^{4,6,7}
6. For asymptomatic women, the Clinical Effectiveness Unit of the Faculty of Sexual & Reproductive Healthcare states: “Intrauterine contraceptive users with ALOs detected on swab or smear who have no symptoms should be advised there is no reason to remove the intrauterine method unless signs or symptoms of infection occur. There is no indication for follow-up screening.”⁸ A single study in the literature suggests that an interval reinsertion may decrease the rates of re-colonisation of the new intrauterine device with ALOs although whether this results in clinically meaningful outcomes is uncertain. The sample size of this study was small with a high number lost to follow up.⁹
7. Insertion or reinsertion of an intrauterine method can be carried out in asymptomatic women with ALOs. There is no need to remove a device in asymptomatic women with ALOs.¹⁰
8. Women who have symptoms such as pelvic pain, discharge or abnormal vaginal bleeding should be advised to seek medical advice. Other causes of infection (in

Clinical Guideline for: Management of actinomyces-like organisms on smears

Author/s: Saadia Naeem, Consultant Gynaecologist, Catherine Schunmann, Consultant in Sexual and Reproductive Health

Approved by: Gynaecology Guidelines Committee

Date approved: 24/01/2022

Review date: 24/01/2025

Available via Trust Docs

Version: 4

Trust Docs ID: 756

Page 3 of 4

Guidelines on the Management of Actinomyces-Like Organisms (AIOs) on Smears in Patients with Intrauterine Contraception

particular sexually transmitted infections) should be considered and it may then be appropriate to remove the IUC having organised a reliable ongoing method of contraception. Treatment of pelvic infection should be in accordance with Royal College of Obstetricians & Gynaecologists (RCOG) and British Association of Sexual Health & HIV (BASHH) Guidelines.^{10,11}

In the outpatient setting, review at 72 hours is recommended to ensure that symptoms and signs are improving. If not, removal of the device and admission for parenteral therapy and exclusion of differential diagnoses may be required.^{10,11}

Acknowledgement:

This guideline was revised in conjunction with Dr Catherine Schunmann, Consultant in Sexual & Reproductive Health and Dr. Catherine Tremlett, Consultant Medical Microbiologist.

References:

1. Russo T. Agents of Actinomycosis. In Mandell, Douglas and Bennett. Principles and Practice of Infectious Diseases. Elsevier 2012. 255: 3214.
2. Wong VK. Actinomycosis. *BMJ* 2011;343:d6099 doi: 10.1136/bmj.d6099
3. Curtis EM, Pine L Actinomyces in the vaginas of Women with and without Intrauterine Contraceptive Devices. *Am J Obstet Gynecol* 1981; **152**: 287-290
4. Lippes J. Pelvic actinomycosis: a review and preliminary look at prevalence. *Am J Obstet Gynecol* 1999; **180** (2, part 1): 265-269
5. Merki-Feld GS, Rosselli M, Imthurn B. *Contraception* 2008; **77**: 177-180
6. Persson E, Holmberg K, Dahlgren S et al. Actinomyces israelii in the genital tract of women with and without intrauterine contraceptive devices. *Acta Obstetrica et Gynecologica Scandinavica* 1983; **62**: 563-8
7. Persson E, Holmberg K. A longitudinal study of Actinomyces israelii in the female genital tract. *Acta Obstetrica et Gynecologica Scandinavica* 1984; **63**: 207-16.
8. Faculty of Sexual & Reproductive Health Care. Clinical Effectiveness Unit (CEU). Member's Enquiry Response. Ref 2911. 9.10.2009. www.fsrh.org.uk
9. Faculty of Sexual & Reproductive Health Care. Clinical Effectiveness Unit (CEU). Member's Enquiry Response. Ref 4131. 1.7.2013. www.fsrh.org.uk
10. Faculty of Sexual & Reproductive Health Care. Intrauterine Contraception April 2015, amended 2019 www.fsrh.org
11. British Association of Sexual Health & HIV (BASHH) PID 2019. www.bashhguidelines.org