Premature Ovarian Insufficiency (POI)

Dr Sam Morgan & Dr Harriet Delap

GPs & BMS Accredited Menopause Specialists

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Why POI is an important topic

Definition

Aetiology

Diagnosis

Management

Investigations & referral, HRT, lifestyle, fertility, long-term health

Resources - clinicians and patients

QI ideas

POI is a clinical syndrome defined by loss of ovarian activity before age 40.

Language is important - not premature ovarian failure

Prevalence

- 1/100 under age 40 - may actually be up to **3.5%**
- 1/1000 under age 30
- 1/10000 under age 20

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Why this is an important topic

POI is common.

When unrecognised and untreated there are significant symptoms and long-term health outcomes.

These symptoms and long-term health outcomes can be significantly improved with HRT.

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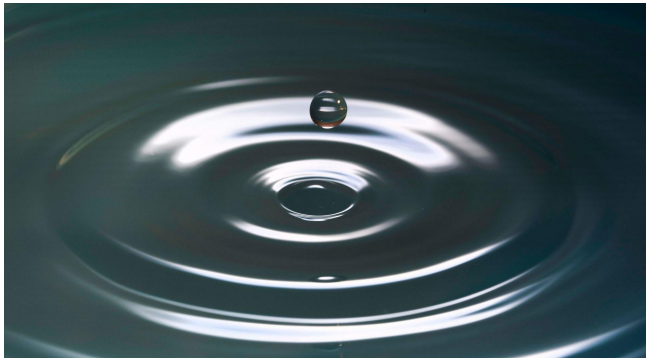
Impact on health and wellbeing

- Life expectancy
- Fertility
- Sexual function
- Mental health
- Heart health
- Bone health
- Brain health



Fertility and pregnancy

May be the most important concern to your patient.

Spontaneous conception rates 5-10%.

Medications to induce ovulation have not improved conception rates.

Oocyte donation is an option.

HRT is not contraceptive.

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Sexual function

Sexual wellbeing and sexual function are often affected, so good to proactively and routinely enquire.

Systemic oestrogen, local oestrogen and testosterone may all support sexual wellbeing and function.

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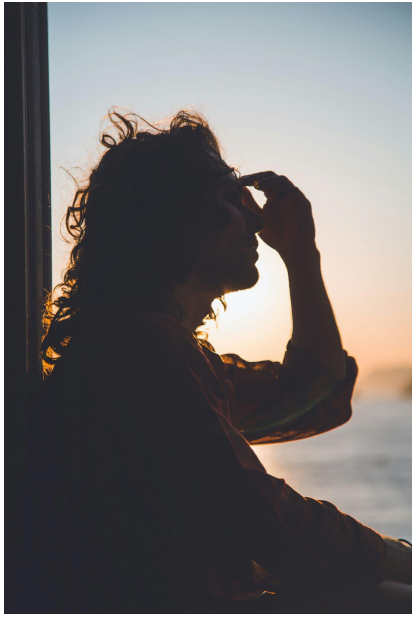
Mental health

A diagnosis of POI can be devastating, particularly for those who wish to conceive.

POI can be a very isolating time, POI specific information should be shared.

Support groups, counselling and online information may be beneficial.



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Heart health

Increased risk of cardiovascular disease including coronary heart disease and heart failure.

Increased cardiovascular mortality was noted in women without HRT up to the age of 45 years.

Hormone replacement until the natural age of the menopause is likely to lower the long-term risk of cardiovascular disease associated with POI.

Lifestyle factors are important too.

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Bone health

POI is associated with reduced BMD (bone mineral density) and an increased risk of fracture later in life.

HRT until the natural age of the menopause to reduce the risk of fracture.

HRT preferred over bisphosphonates.

Lifestyle factors are important too.

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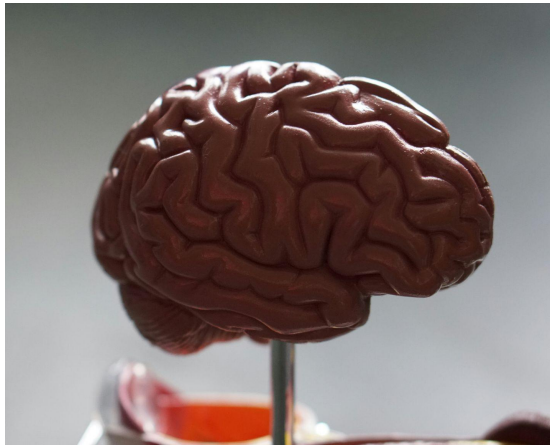
Brain health

POI is associated with increased risk cognitive impairment and dementia.

HRT until the natural age of the menopause to reduce the risk on brain health.

Lifestyle factors are important too.



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Questions?

Aetiology

- Idiopathic (85-90%)
- Genetic (chromosomal abnormalities e.g. Turner’s syndrome and Fragile X in approx 10%)
- Autoimmune (up to 5%)
- Iatrogenic - chemotherapy, radiotherapy, surgery
- Other - including infections

Clinical features

Amenorrhoea or oligomenorrhoea. Usually secondary, can be primary.

Menopausal symptoms

- Vasomotor symptoms most commonly reported in POI
- Also insomnia, joint pain, labile mood, low energy, low libido as well as impaired memory and concentration
- Genito-urinary symptoms in 40-50%
- Symptoms can vary in intensity and be intermittent
- No symptoms in 12-14%

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History

- Menstrual pattern, recent contraception use
- Medical history - any associated conditions? Iatrogenic factors?
- Family history
- Symptoms of other possible causes of amenorrhoea or oligomenorrhoea - BMI, PCOS, stress, eating disorder
- Fertility plans
- Menopause symptoms

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When to consider POI

Secondary amenorrhoea

- including post pill and post pregnancy

Menopausal symptoms

- including in pill free interval on COC

CKS - Secondary amenorrhoea

State	Oestradiol	FSH	LH	Prolactin	Testosterone
Hyperprolactinaemia	Low	Normal/low	Normal/low	High	Normal
Polycystic ovary syndrome	Normal/low/high	Normal	Normal/slightly increased Elevated LH: FSH ratio may support diagnosis	Normal/slightly increased (in up to 52%)	Normal/moderately increased Free androgen index increased
Premature ovarian insufficiency	Low	High	High	Normal	Normal/low
Functional hypothalamic (for example weight loss, excessive exercise, or stress)	Low	Normal/low	Normal/low	Normal/low	Normal/low

Sophie is 34 and recently attended for cervical screening. Her astute practice nurse noted the examination seemed particularly painful for her. On questioning she is struggling with vaginal dryness and sex has been painful. She has put this down to postnatal changes, her second child was born 11 months ago. She breastfed for 6 months and has been quite relieved that her heavy periods haven't come back yet. She has been feeling tired, like any new Mum, and sometimes had some night sweats but they have come and gone.

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Questions?

Investigations - diagnosis

Pregnancy test

FSH x 2 levels at least 4 weeks apart

- BMS consensus statement >40 IU/l
- Remedy guideline >30 IU/l
- ESHRE guideline >25 IU/l

Oestradiol

Prolactin

(Assess ovarian reserve via AMH or antral follicle count on TVS)

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Investigations - aetiology of POI

Thyroid function and antibodies

Autoimmune screen including adrenal antibodies

Chromosome analysis - not in Remedy guideline for pre-referral investigation

The following investigations should be requested prior to referral:

TEST	POSITIVE RESULT
TSH	Manage according to Hypothyroid pathway
Thyroid antibodies	Annual TSH monitoring
Adrenal antibodies	Highlight within referral letter
HbA1c	Manage according to CKS Type 2 Diabetes Guidelines
Lipids	CVD risk score for all at diagnosis
FBC/B12/folate/ferritin	Intrinsic Factor antibody if low B12

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Investigations - long-term health

Hba1c

Lipid profile, Qrisk (POI not included as risk factor)

Assessment bone health

- baseline DEXA
- Qfracture from age 33, FRAX from age 40

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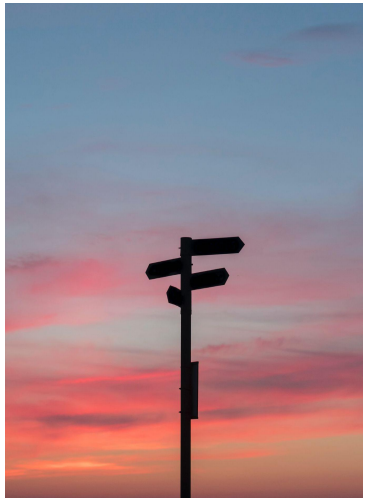
Questions?

Management - referral

Remedy guideline - refer all those with suspected or confirmed POI, some investigations recommended before referral

Patient support groups eg Daisy network and Mothering and the Menopause and My Life on Pause



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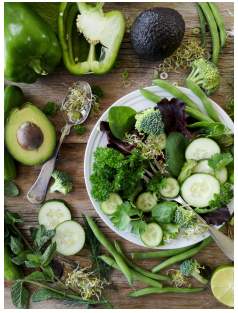
Management - lifestyle

Sleep

Nutrition including Calcium and vitamin D



Weight

Movement including strength training for bone health

Rest

Smoking cessation and alcohol intake.

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Management - hormone replacement

Estradiol, orally or transdermally.

Higher doses oestrogen often needed and should be combined with progestogen for women with a uterus.

Sequential HRT if wish to conceive.

Local oestrogen in addition.

Consideration of testosterone.

Combined pill if contraception required.

Management - monitoring

Once diagnosed it is recommended that patients have an annual check

- HRT or COC review
- cardiovascular risk (bp, weight, smoking, HbA1C, lipids)
- DEXA scans as appropriate

Bloods every 3-5 years monitoring thyroid and adrenal antibodies.

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Questions?

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QI ideas

How many patients do you have coded as POI? Prevalence is >1%

How many have had an assessment of heart and bone health?

How many are on HRT or COC?

How many are on local oestrogen and have had an assessment of sexual function?

How many have been offered psychological support?

How many have had a conversation about fertility and contraception if required?

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Research

POISE study - HRT vs COC
(impact on symptoms and long-term health)

Recruiting in Bristol

POI Registry - international database

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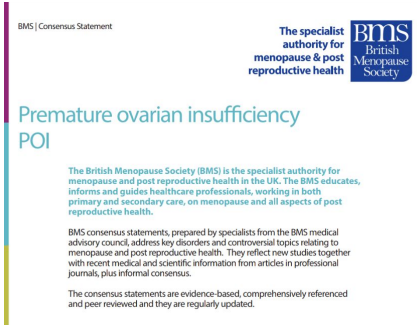
Resources - clinicians

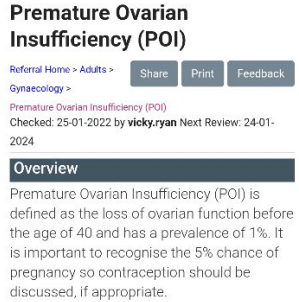
POI BMS consensus Statement

Management of women with POI ESHRE

Managing POI in primary care PCWHF

POI guideline Remedy





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Resources - patients

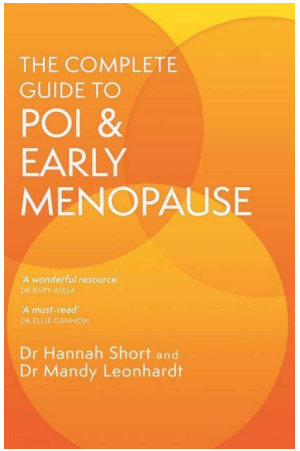
Daisy Network

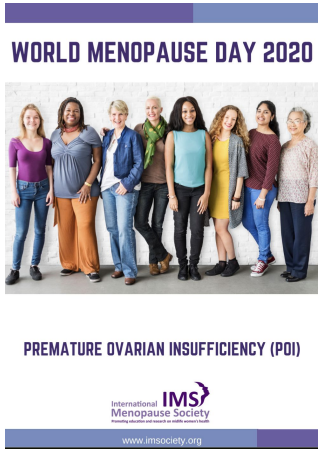
The Complete Guide to POI by Dr Hannah Short

My Life on Pause by Dr Siobhan O'Sullivan

Patient leaflet (available in 14 languages)

Mothering and the menopause support group





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Any questions?

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