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Menopausal transition

Assessment in general practice

Background

The presentation of a woman in midlife can be an opportunity for both the woman and her doctor to consider a wide range of issues that may be impacting on quality of life or that present a risk to her future health.

Objective

This article considers the assessment of a woman in the menopausal transition.

Discussion

The aim of assessment is to manage acute menopausal symptoms (eg. hot flushes); the complications of menopause (eg. osteoporosis); to avoid risk factors for complications (eg. fracture, thromboembolism); and to ensure a preventive healthcare plan is in place.

Keywords: menopause; general practice; risk assessment

CPD

The overall goals in the assessment of menopausal women are no different to those for any patient. While menopause and aging are normal biological events, there can be consequences that can lead to considerable morbidity and mortality. The word 'menopause' encompasses the natural decline in ovarian function, however, the focus should be on defining symptoms and other factors that may be impacting on a woman's daily activities, regardless of her hormone/menstrual profile.

The aim of the assessment of the menopausal woman is to:

- manage acute menopausal symptoms (eg. hot flushes)
- manage complications of menopause (eg. osteoporosis)
- avoid risk factors for complications (eg. fracture, thromboembolism), and
- ensure that all other aspects of preventive healthcare are addressed.

Encourage active participation in decision making

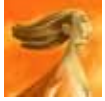
An open, two way patient-doctor relationship is essential, as sensitive information such as incontinence or loss of libido will only be communicated with trust. To be a partner with the doctor in decision making,[1] rather than being told dogmatically what to do, is therapeutic in itself. Women must be given the opportunity to consider all options, enabling them to make informed decisions about their health management.

Allow time

Most importantly, the thorough assessment of a menopausal woman requires time. Often midlife is the first time a woman has sought assistance and advice for herself alone. She may have always been the nurturer, homemaker, taxi driver, breadwinner; looking after everyone else's needs above her own. Beside the physical and psychological symptoms of menopause, not infrequently there are a multitude of external issues to discuss and resolve. Time is essential to assess total wellbeing; to tease out the stressors that may be impacting on biological symptoms.

Recognise and respect individual factors that may affect presentation

When assessing a woman who has presented in midlife for whatever reason, the general practitioner must be aware of the many factors that may influence individual presentation. While menopause is a normal



biological event, there is an enormous variation in prior experiences, concerns and knowledge, such as:

- age and circumstances: a woman aged 40 years will have different concerns and priorities to a woman aged 65 years. Changes to reproductive status may be devastating if she was planning further pregnancies but has now 'left it too late'. Women experiencing premature ovarian failure, or a premature sudden surgical or chemical menopause related to cancer treatment, may not only experience more severe symptoms, but may be dealing with their loss of fertility, their perceived 'loss of youth' or cancer consequences
- preconceived fears about menopause[2] such as cancer and weight gain: women will be influenced by controversies accrued from sources where the accuracy of information can be variable – an excellent example being the hysteria created by the publication of the Women's Health Initiative (WHI) trial where women stopped taking hormone therapy (HT) and doctors changed their prescribing of HT[3]
- socioeconomic situation: financial stressors may govern whether the woman is able to afford investigations, therapies and medical assessment; those living in rural and remote areas may not have access to resources
- cultural differences: customs and attitude to menopause[4] and aging vary greatly; language barriers may prevent access to information
- health and wellbeing: attitude to lifestyle and current personal life situation will impact on the capacity to tolerate symptoms.

The assessment

Being mindful of the above factors, the assessment of a woman in the menopausal transition will depend on the nature of her presenting symptoms, but should include risk factor assessment and current screening status with particular attention to systems which are relevant to menopausal status. Questions to be considered are:

- What is the current symptom profile?
- Can these symptoms be due to a pathological cause?
- Are there risk factors for any long term 'complications' of menopause such as osteoporosis, cardiovascular disease?
- Are there risk factors which may impact on management options such as risk of cancer/venous thromboembolism?
- Is there a comprehensive overall preventive healthcare plan in place?

Current symptom profile

Women in midlife may present with specific symptoms, which may or may not be menopause related (eg. hot flushes, depression, menorrhagia). Others will be asymptomatic, seeking or clarifying information obtained from other sources. They may be fearful of perceived complications of menopause such as aging and osteoporosis. Many women cannot understand why they are suffering when their friends have 'gone without even a flush'. Some may present for their routine 'well woman's check', aware or unaware of specific health issues which may need to be assessed to prevent future health problems.

Why does she think she is menopausal?

Confirmation of the woman's understanding of the 'normal' process is important, particularly as there is a vast array of 'information' available via friends, family, media, advertising, internet and other health professionals. Invariably these sources vary considerably in accuracy and motive. A simple explanation of the physiology of the menopausal transition, the function of hormones and the impact that these hormone deficiencies may have on short and long term health, will facilitate the history taking and, in itself, may eliminate many concerns (*Table 1*).

It is important that the woman has an understanding that every woman's experience throughout the menopausal transition is unique and information must be specific to her situation and based on a

Table 1. Explaining menopause

Before menopause the ovaries (usually) release an egg each month, which then triggers the normal cascade of hormone changes that result in regular periods and cyclical changes.

As the ovaries 'fail', they begin to release their eggs erratically, which in turn causes erratic hormone levels. Periods become erratic and we enter a stage of 'hormonal chaos' where hormone levels are unpredictable and 'all over the place'. This is why you may have symptoms such as hot flushes (when the ovary hasn't released an egg for a while and hormone levels drop) and then suddenly the hot flushes disappear (because your ovary spontaneously released an egg and gave you a 'dose of hormones' naturally). This 'spontaneous release of an egg' is why you need to use contraception for at least 12 months from your last natural period. This period of time, called the 'menopausal transition', can take up to 4–5 years.

Very rarely do the ovaries 'switch off' overnight (unless they are removed surgically). Eventually, the ovaries fail completely, no eggs are released and hormone levels drop to postmenopausal levels.

How your body reacts to these low hormone levels is different for every woman. Some women (around 20%) will have no symptoms; another 20% will have severe, disabling symptoms; and most (60%) fall in the middle. Similarly, the types of symptoms experienced will vary between women – some get hot flushes, some get mood symptoms, others may have a dry vagina; some have all symptoms!

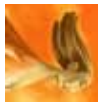
Your symptoms will also depend on whatever else is going on in your life at the time, such as whether you are stressed or have other medical or psychosocial conditions that are impacting on your menopause symptoms.

It is like putting everything – hormones, relationships, genetics, work, stressors, general health and lifestyle into a big pot and stirring it around and you come out as you are. Therefore, 'fixing your hormones' will only be a part of your overall health management plan.

Table 2. Symptoms potentially present at menopause and differential diagnoses

Assessment	History and examination findings		Could this be due to…?	Investigations in specific circumstances (some may be specialist initiated)
General menopausal symptoms	Flushes	• Excessive or not relieved with oestrogen • Associated factors: weight loss, hypertension, diarrhoea, anxiety, goitre, thyroid nodule	• Thyroid disease • Phaeochromocytoma • Carcinoid syndrome	• Thyroid stimulating hormone (TSH) • 24 hour urinary catecholamines • 24 hour urinary 5 HIAA
	Night sweats	• Lymphadenopathy • Hepatosplenomegaly • Weight loss	Malignancies (eg. lymphoma, myeloma)	Appropriate blood work up, chest X-ray, node biopsy, serum and urine protein electrophoresis
	Palpitations	Associated cardiac symptoms	Cardiac arrythmia	Electrocardiogram (ECG), 24 hour holter monitor
	Formication ('ants crawling on skin')	• Presence of rash • New sexual partner (ie. risk sexually transmissible infections [STIs])	• Scabies • Dermatitis	Skin examination
	Myalgia and arthralgia	Associated joint swelling, inflammation	Rheumatological disorders arthritis	Erythrocyte sedimentation rate (ESR), C-reactive protein (CRP) autoimmune serology, joint X-ray
	Migraine/ headaches	Unusual, focal neurological symptoms and signs	Intracranial lesion	Computed tomography (CT), magnetic resonance imaging (MRI) brain
Gynaecological symptoms	Menorrhagia	• Persistent (ie. not a one-off heavy bleed) • Flooding at night • Clots • Anaemia or iron deficiency	• Fibroid • Uterine polyp • Endometrial hyperplasia • Uterine cancer • Adenomyosis • Thyroid dysfunction • Coagulopathies	• Transvaginal ultrasound (performed by a specialist gynaecological ultrasonographer) • Endometrial sampling (Pipelle biopsy, hysteroscopy) • Full blood examination (FBE), ferrum (Fe) studies, TSH, coagulation profile
	Amenorrhoea	• Recent unprotected intercourse • Associated factors, eg: – galactorrhoea, headache, visual field defects – thyroid symptoms – androgen excess – recent weight changes, eating disorders, exercise intensity – pelvic pain, mass	• Pregnancy • Hypothalamic dysfunction • Pituitary dysfunction • Ovarian tumours • Thyroid disease • Polycystic ovary syndrome (PCOS)	• Beta human chorionic gonadotrophin (HCG) • Transvaginal ultrasound • CT/MRI brain/pituitary • TSH, androgen screen, prolactin
	Hysterectomy Mirena™ IUD in situ	Oestrogen deficiency symptoms	Menopause	Follicle stimulating hormone (FSH) and oestradiol (if not on oral contraceptive pill [OCP] or HT; measured ~ day 3 of cycle)
	Postcoital bleeding	• Cervical polyp • Abnormal Pap smear/history	Cervical cancer	Biopsy
	Family history	Relevant family history of cancer (CA): ovary, breast, uterus, bowel	Cancer ovary, uterus (familial)	• Transvaginal ultrasound • CA 125, inhibin, genetic testing

	Pelvic pain	• Palpable mass • Deep dyspareunia • Per vaginal (PV) discharge, febrile • Known history endometriosis	• Cancer ovary/uterus • Endometriosis/ adenomyosis • Ovarian cyst • Pelvic inflammatory disease (PID)	• Transvaginal ultrasound • Laparoscopy • Swabs
Genitourinary symptoms	Incontinence	• Stress incontinence • Urge incontinence • Faecal incontinence	• Pelvic floor dysfunction • Detrusor instability • Fistula	• Urodynamics • Physiotherapy assessment
	Urinary symptoms	• Fever, dysuria, haematuria • Polyuria/oliguria • Polydipsia	• Urinary tract infection • Renal insufficiency • Diabetes	• Midstream specimen of urine (MSU) • Renal function tests • Fasting blood glucose
	Vulval irritation	• Vaginal discharge • Superficial dyspareunia • Abnormal vulval appearance: lichenification, absent labia minora, inflammation, lesions	• Vaginal infections: thrush, STI • Lichen sclerosus • Candidiasis • Vulval cancer	• Swabs • Vulval biopsy
Sexual symptoms	Loss of libido	• Relationship issues • Associated lethargy, tiredness, depression • Bilateral oophorectomy • Superficial dyspareunia • Use of medications (eg. selective serotonin reuptake inhibitors [SSRIs], OCP, oestrogen)	• Androgen insufficiency syndrome • Mood disorder • Atrophic vaginitis • Medication side effects • Relationship breakdown	• Sensitive testosterone (T), sex hormone binding globulin > calculated free T (measured in morning, ~ day 7 of cycle) • Trial of local oestrogen • Trial off/change medication
	Sexual partner	New partner, not using condoms Partner in another sexual relationship	STI	STI screen: serology syphilis, HIV, hepatitis, urine PCR for chlamydia
Breast symptoms	Family history	Relevant family history of breast or ovarian cancer	Breast cancer (familial)	• Diagnostic mammogram +/– • Ultrasound • Genetic testing
	Breast changes	• Palpable lump or skin distortion • Nipple discharge/eczema • Abnormal screening mammogram	• Breast cancer • Fibroadenoma • Breast cyst/abscess • Mammary duct ectasia	• Diagnostic mammogram • Ultrasound • Biopsy (eg. fine needle, core, excisional)
Psychosocial symptoms	Depression/anxiety	• Family/past history mood disorders including premenstrual syndrome (PMS), postnatal depression (PND) • Panic attacks, phobias, sleep disturbance • Loss of motivation, loss of libido, appetite, suicidal thoughts • Current use of medications (eg. SSRIs)	• Major depressive disorder • Generalised anxiety disorder • Specific phobias • Panic disorder • Bipolar disorder • Schizophrenia	Psychological assessment
	Memory loss	• Poor concentration • Disorientation	• Cognitive disorder • Dementia	• Mini Mental State Examination • Neuropsychological testing



thorough assessment of all interplaying factors. Some women have symptoms, some don't, some will need HT, others won't, some need investigations, others don't.

What else may be impacting on her symptoms?

All individual factors and circumstances that may be impacting on a woman's symptom profile must be defined, including use of medications, beliefs and knowledge about menopause, other medical conditions, reproductive status, circumstances of her menopause, midlife psychosocial issues and lifestyle factors.

Is it possible her symptoms are due to a pathological rather than biological cause?

While the 'typical' presentation of menopause with symptoms such as flushes; insomnia; mood disorders; dry vagina; and an erratic, diminishing menstrual cycle is simple to ascertain, it is also important to consider whether the symptoms may be due to a pathological cause, particularly if they do not respond to a trial of oestrogen. *Table 2* outlines potential differential diagnoses for common symptoms. Clearly it is important to balance both concepts – 'common things occur commonly' and 'when in doubt investigate'.

Risk factors for long term complications

Risk factor assessment is relevant to the:

- avoidance of long term potential consequences of oestrogen deficiency, such as osteoporosis and fracture
- choice of management options, such as use of hormone versus nonhormone therapies; oestrogen only versus combined therapy; or transdermal versus oral therapy
- overall preventive healthcare plan.

Risk factor analysis should routinely include history and examination to consider cardiovascular, cancer, fracture and thromboembolism risk (*Table 3*).

The preventive healthcare plan

Once a thorough history and physical examination have been completed, the majority of women will not need further investigations other than updating routine preventive health screening status, ie. Pap test, mammogram and fasting lipids/glucose.[5]

Additional investigations should be judiciously chosen and targeted to investigate a specific finding or for analysis of risk factors. Hormone tests to 'prove' the 'diagnosis of menopause' are of limited use.[6] In the menopausal transition, follicle stimulating hormone (FSH) and oestradiol levels are extremely variable depending on the current level of ovarian activity. Follicle stimulating hormone levels are used in the diagnosis of premature menopause in young women with amenorrhoea and may be helpful in situations where there is no uterine bleeding, such as hysterectomy or intrauterine device (IUD) – but what is the relevance and how will the result influence your overall management plan? Are you not going to relieve symptoms if her FSH is low or suggest treatment just because her FSH is high?

Table 3. Risk assessment in midlife women

Risk assessment	Significant risk factors	Possible additional investigations (some may be specialist initiated)
Cardiovascular	• Family history of ischaemic heart disease (IHD), stroke, cardiovascular disease (CVD) risk factors • Past history of IHD, stroke • Diabetes, hypertension, hyperlipidaemia, obesity, smoker • Sleep apnoea	• Glucose tolerance test • Urine microalbumin, renal function tests • 24 hour blood pressure monitor • Chest X-ray • ECG, echocardiogram • Sleep study NB: Absolute cardiovascular risk calculator: www.cvdcheck.org.au
Osteoporosis risk assessment Fracture risk	• Past history of fragility fracture: site, spontaneous or fall related • Family history hip fracture • Age over 65 years • Low body mass index (BMI) • Low T-score on DXA • >3 months corticosteroid use • High fall risk: frail, visually impaired, neuromuscular disorders, sedative use • Lifestyle: sedentary, prolonged immobilisation, smoker, more than three units of alcohol per day, low calcium and/or, vitamin D intake	• Exclusion of secondary causes of osteoporosis: – calcium, phosphate, parathyroid hormone, vitamin D – liver function tests; creatinine, urea and electrolytes; TSH – ESR; urine and serum protein electrophoresis – coeliac serology • Plain X-ray spine to exclude compression fracture if back pain, loss of height • Bone scan if osteoporosis very localised • Bone turnover markers – used to assess treatment rather than risk

	• Chronic disorders: rheumatoid arthritis, type 1 diabetes mellitus, hyperthyroidism, liver disease, chronic renal failure • Hyperparathyroidism, hypogonadism (including premature menopause and secondary amenorrhoea), malabsorption syndromes (including coeliac disease), multiple myeloma	NB: FRAX® WHO Fracture Risk Assessment Tool calculates percentage likelihood that an individual will sustain a fracture in the next 10 years using clinical risk factors in conjunction with bone density measurements, providing opportunity for more accurate targeting of therapies to prevent fractures based on probability rather than simply T-score: www.shef.ac.uk/FRAX/
Thrombophilia	• Family history of deep vein thrombosis (DVT), pulmonary embolism (PE), genetic thrombophilia • Past history DVT, PE – what circumstances, ie. spontaneous, related to surgery or pregnancy, young age • Known thrombophilia, ie. Factor V Leiden mutation • Older age (>60 years) • High BMI • Smoker • Recent hospitalisation/surgery/hip, leg fracture, immobilisation, travel • Past history recurrent miscarriages • Systemic lupus erythematosus, cancer • Medications – tamoxifen, raloxifene	• Thrombophilia screen – activated protein C resistance (APCR) – Factor V Leiden – prothrombin gene mutation – homocysteine – protein C&S, antithrombin III – coagulation profile • Antiphospholipid antibodies: anticardiolipin Ab, lupus anticoagulant
Cancer	**Breast cancer** • Increasing age, increasing weight • Nulliparous, later age at birth of first child, no breastfeeding, early menarche • High mammographic breast density • More than three alcoholic drinks per day • Ashkenazi Jewish ancestry • Past history invasive cancer breast, DCIS, atypical ductal hyperplasia • Family history breast cancer (depends on degree, number, age) • Past or family history ovarian cancer • Family or personal history hereditary nonpolyposis colorectal cancer (HNPCC) • Known family or personal BRCA1 or BRCA2 gene mutations • Diethylstilbestrol (DES) use in pregnancy/in utero	• Refer: National Breast and Ovarian Cancer Centre guidelines: www.nbcc.org.au • Diagnostic mammogram • Ultrasound • Breast MRI • Breast biopsy • Genetic testing
	Ovarian cancer • Older age (>65 years) • Nulliparous or first child after 30 years, early menarche, late menopause • Family history ovarian cancer • Known family or personal BRCA1 or BRCA2 gene mutations • Family or personal history HNPCC	• Transvaginal ultrasound • Tumour markers: CA 125, inhibin • Genetic testing • Laparoscopy
	Endometrial cancer • Aged >50 years • Nulliparous • Taking tamoxifen, anastrozole, unopposed oestrogen • Endometrial hyperplasia • Family or personal history HNPCC	• Transvaginal ultrasound • Endometrial sampling

Ongoing management depends primarily on the impact the symptoms are having on the woman's daily activities, not on blood test results.[6]

Bone density assessment with dual energy X-ray absorptiometry (DXA) currently attracts a Medicare rebate for those identified (using specific criteria) as being at high risk of osteoporosis.[7] Nevertheless, any woman can be offered the option of having a DXA as a preventive measure to assess their baseline risk (approximately $100).

Specific findings on examination such as a breast lump or pelvic mass clearly require further investigation. Symptoms such as urinary incontinence or low libido may need further investigation. There may also be findings from the assessment that are completely unrelated to menopausal status (eg. per rectal bleeding, an unusual skin lesion). Women with a history of certain familial disorders – such as breast or ovarian cancer – may need specific investigations to complete their risk factor analysis.

Once all this information has been gathered a list of issues can be defined, and management options devised and discussed with the woman, who can then be given the opportunity to consider all options, enabling her to make informed decisions and take control of her own health management.

Resources

- The Jean Hailes Foundation: www.jeanhailes.org.au
- Australasian Menopause Society: www.menopause.org.au
- National Breast and Ovarian Cancer Centre: www.nbcc.org.au
- National Heart Foundation: www.heartfoundation.org.au
- Guidelines for preventive activities in general practice (the 'red book'): www.racgp.org.au/redbook
- International Osteoporosis Foundation: www.iofbonehealth.org.

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