ANDROLOGY AUSTRALIA

ADULTHOOD

EXAMINATION OF MALE GENITALS AND SECONDARY SEXUAL CHARACTERISTICS

3 CLINICAL SUMMARY GUIDE

When should I perform an examination?

1. As part of a standard health check-up with new or existing patients
2. 45 year old health check (MBS Item 717)
3. Prior to initiation of drug treatment (e.g. testosterone, vasodilators) or investigation of conditions such as infertility or prostate disease
4. **On presentation of relevant disorders and symptoms (below):**

Disorders	Risk factor for:
❑ Undescended testes as an infant	Testicular cancer
❑ Past history of delayed puberty	Androgen deficiency
❑ Gynaecomastia	Androgen deficiency, Klinefelter's syndrome
❑ Infertility	Androgen deficiency, testicular cancer
❑ Erectile dysfunction (ED)	Co-morbidities
❑ Past history of testicular cancer	Testicular cancer
❑ Pituitary disorders	Androgen deficiency, male infertility
❑ Osteoporosis and atraumatic fractures	Androgen deficiency
❑ Haemochromatosis	Androgen deficiency, male infertility
Symptoms	
❑ Testicular pain or lumps	Tumour or cyst
❑ Reduced libido, hot flushes, fatigue, gynaecomastia, ED, mood changes, reduced beard or body hair, poor or reduced muscle development	Androgen deficiency

How do I best approach an examination with my patient?

- Posters or pamphlets in your clinic can raise awareness about men's health examinations and convey that patients can discuss reproductive health concerns with you
- Explain why you need to perform the examination and ask for permission to proceed
- Allow the patient to ask questions and express any discomfort before/during the examination
- Ask specific questions during history-taking, to assist those patients reluctant to raise sensitive problems

Adulthood history and examination

Presentation with acute testicular pain

- Testicular torsion
- Refer immediately for surgery
- This is a medical emergency
- Later follow up review (e.g. epididymo-orchitis)

History

- ❑ Fertility in current and past relationships
- ❑ Testicular trauma, cancer, STI
- ❑ Inguinal-scrotal surgery (undescended testes, childhood hernia)
- ❑ Symptoms of androgen deficiency
- ❑ Systemic treatment for malignancy, immunosuppression, organ transplant (for possible testicular damage)
- ❑ Gynaecomastia
- ❑ Occupational or toxin exposure

Testicular examination

- Testicular volume
  - **Normal range of adult testicular volume: 15-35mls**
  - Small firm testes <4 mls: suggests Klinefelter's Syndrome
- Scrotal and testicular contents
  - Abnormalities in the texture or hard lumps: suggests tumour or cyst
  - Enlargement, hardening or cysts of the epididymides
  - Varicocele
  - Nodules or absence of vas deferens

Penile examination

- Hypospadias
- Peyronie's disease
- Micropenis
- Urethral stricture
- Evidence of infection (STI) or inflammation
- Foreskin: balanitis, phimosis

Secondary sexual characteristics of androgen deficiency

- Reduced facial, body and pubic hair
- Gynaecomastia
- Reduced or poor muscle development

Prostate and other examinations

- Digital rectal examination in older men suspected of prostatic disease, or androgen deficiency
- If the prostate is enlarged or nodular, refer to urologist
- General medical review of erectile dysfunction. Focus on cardiovascular risk (BP, pulses) & diabetes (including neuropathy)

Refer to Clinical Summary Guide 9

EXAMINATION OF TESTIS AND SCROTAL CONTENTS

For references and other guides in this series visit www.andrologyaustralia.org

Androgen deficiency (AD)

Presentation

- ❑ Symptoms of AD, including AD in ageing men
- ❑ Following testis surgery, torsion, trauma, cancer treatment
- ❑ Incidental findings of small testes
- ❑ In association with infertility

Primary investigations

- Total testosterone level (two morning samples) and LH/FSH level

Investigations if low total testosterone with normal or low LH/ FSH

- Serum prolactin (prolactinoma)
- MRI pituitary (various lesions)
- Olfactory testing (Kallmann's syndrome)
- Iron studies (haemochromatosis)
- Also commonly seen with co-morbidities (obesity, depression, chronic illness): focus on underlying condition

Other investigations

- SHBG/calculated free total testosterone (selected cases, e.g. obesity, liver disease)
- Bone density study (osteoporosis)
- Semen analysis (if fertility is an issue)
- Karyotype (if suspicion of 47XXY)

Treatment and specialist referral

- Testosterone Replacement Therapy (TRT)
  *Contraindicated in prostate and breast cancer
  *Withhold treatment until investigation complete
- In general, TRT is not justified in older men without underlying pituitary or testicular disease
- Low-normal total testosterone is common in obesity or other illness and may not reflect AD. Address underlying disorders first.
- Consult a specialist to plan long term management:
  – Refer to endocrinologist
  – Refer to fertility specialist as needed

Refer to Clinical Summary Guide 4

Klinefelter's syndrome (47XXY)

Presentation

- ❑ Small firm testes <4ml characteristic from mid puberty
  Infertility (azoospermia) or androgen deficiency
- ❑ Other features vary, and are often subtle. These include taller than average height, reduced facial and body hair, gynaecomastia, osteoporosis and feminine fat distribution

Primary investigations

- Total testosterone level (androgen deficiency)
- LH/FSH level (both elevated)

Other investigations

- Bone density study (osteoporosis)
- Semen analysis (usually azoospermic)
- TFT (hypothyroidism)
- Fasting blood glucose (diabetes)

Treatment and specialist referral

- Develop a plan in consultation with an endocrinologist
- Refer to endocrinologist, as TRT is almost always needed
- Refer to fertility specialist as appropriate, for sperm recovery from testis (occasionally) or donor sperm

Refer to Clinical Summary Guide 10

Penile abnormality

Presentation

- ❑ Hypospadias
- ❑ Micropenis
- ❑ Phimosis
- ❑ Peyronie's disease
- ❑ Urethral stricture

Treatment and specialist referral

- Refer to urologist for investigation and treatment plan

Testicular mass

Presentation

- ❑ Painless lump
- ❑ Self report, incidental
- ❑ Past history undescended testes (cancer risk)
- ❑ Confirm lump is in testis rather than epididymal cyst

Primary investigations

- Testicular ultrasound

Treatment and specialist referral

- Refer to uro-oncologist
- Offer pre-treatment sperm cryostorage

Refer to Clinical Summary Guide 6

Gynaecomastia

Presentation in adulthood (common)

- ❑ Excessive and/or persistent breast development
- ❑ Androgen deficiency
- ❑ Chronic liver disease
- ❑ Hyperprolactinaemia
- ❑ Adrenal or testicular tumours
- ❑ Drugs (e.g. spironolactone), marijuana, steroids
- ❑ Distinguish from 'pseudogynaecomastia' of obesity

Primary investigations

- Total testosterone level, estradiol, FSH/LH
- LFTs, iron studies (haemochromatosis)
- Serum prolactin (pituitary tumour)
- Karyotype (if suspicion of 47XXY)
- βhCG, αFP, ultrasound (testicular cancer)

Treatment and specialist referral

- Refer to endocrinologist
- Refer to plastic surgeon (after evaluation) if desired

Male infertility

Presentation

- ❑ Failure to conceive after 12 months of regular (at least twice weekly) unprotected intercourse
- ❑ Consider early evaluation

(±)Other features:

- ❑ Testis atrophy (androgen deficiency)
- ❑ Past history undescended testis (cancer risk)
- ❑ Psychosexual issues (primary/ secondary)
- ❑ Past history STI (obstructive azoospermia)

Primary investigations

- Semen analysis: twice at 6 week intervals. Analysis at specialised reproductive laboratory if abnormalities
- FSH: increased level in spermatogenic failure
- Testicular ultrasound (abnormal physical examination, past history of undescended testes)
- Total testosterone and LH (small testes <12 ml or features of androgen level)

Treatment and specialist referral

- Healthy lifestyle, cease smoking
- Advice on natural fertility timing
- Identification of treatable factors (often unexplained and no specific treatment)
- Refer to an endocrinologist as necessary
- Refer to a fertility specialist (ART widely applicable)

Refer to Clinical Summary Guide 5

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