Medicolegal aspects of erectile dysfunction – causes and assessment

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Erectile dysfunction (ED) is defined as the inability to get or maintain an erection satisfactory for intercourse. It is very common, and almost every man has had temporary problems at some time in his life. The Massachusetts Male Aging Study is often used as a reference, with around 5% of men having complete ED at age 40, increasing to 15% at age 70. Erectile dysfunction is thus NOT a normal consequence of aging.

Most cases of ED are linked to physical factors. ALL men with ED have a psychological component, as anxiety worsens erection.

Management of erectile dysfunction is usually pragmatic from a clinical point of view and is very rewarding since both the man and his partner will benefit in terms of self-worth and lower depressive scores with better erections regardless of how often they have sex. In men who develop erectile dysfunction following either alleged negligence or injury, the case is much more difficult. There is a minority of cases where one will be able to see and quantify physical damage to the penis, but these are relatively rare. In the majority of cases involving pelvic trauma, then the balance of probability will allow for erectile dysfunction and sometimes ejaculatory dysfunction as an expected result of the trauma.

However, in a great number of civil cases, we do not see an obvious physical problem, and then proving the ***absence*** *of normal erections is extremely difficult.*

This is also relevant to criminal cases in which very often men with an allegation of sexual assault, and many them claim the inability to get an erection.

Where there is prior documentation of erectile dysfunction in the GP or other specialist records, then that can be used as evidence. However, a lot of men will not have this, and then it is often a question of the reliability of the witness evidence.

Many men will find they develop erectile dysfunction linked to either a period of physical inability, chronic pain, or depression, and this should usually respond well to simple therapy with oral medication.

A couple of difficulties occur which are very hard to deal with for an expert:

One may have a grossly obese diabetic 60-year-old man in whom one would expect well over 50% of such a demographic to have a degree of erectile dysfunction, but who claims that prior to his accident, he was having sex every single day with his partner without any need for supplementation or medication. There is little a urologist or andrologist can do to support this claim other than to give the expected norms for such an individual.

Similarly, at the other end of the scale, we will have men who claim that they have profound erectile dysfunction, which renders them incapable of penetration, in a sexual abuse case.

I am often asked by solicitors to carry out tests, either invasive or complicated non-invasive tests, to measure the ability of a man to get an erection. These can include intracavernosal injections (a drug to give

an erection given directly into the penis) or the use of nocturnal penile tumescence monitors, which should record if a man gets an erection in the middle of the night. The problem is that these results are really only valid on the balance of probability and not of a criminal standard of evidence. NPT monitoring involves placing a measurement band (postage stamps can be used!) around the base of the penis and then monitoring how many times at night the subject gets an erection. The problem is that both these tests are fairly easy to defeat by using medication, which is not usually something that would be tested for in a urology setting.

As will be seen from the list of problems linked to erectile dysfunction, this is a multifactorial problem.

In summary, unless there is clear proof prior to the incident or the alleged crime that a man had significant erectile dysfunction, most of the tests and evidence that can be given by an expert tends to be descriptive. It is important that solicitors and barristers are aware of the limitations in this area.

Causes can be broadly grouped as:

- **Vasculogenic** - conditions that affect the flow of blood to the penis. Examples of this include cardiovascular disease, diabetes & high blood pressure.
- **Neurogenic** - conditions affecting the nervous system, which consists of the brain, the nerves, and the spinal cord. Examples of this include multiple sclerosis, Parkinson's disease, spinal injury & stroke.
- **Hormonal** - conditions affecting the levels of hormones in the body. Examples of this include low testosterone (hypogonadism) Cushing's syndrome, hypogonadism, overactive thyroid gland & underactive thyroid gland.
- **Pharmaceutical** – many medications and social drugs can cause erectile dysfunction. Prime among these are hormone treatments, but antihypertensive therapies, opiate painkillers and nicotine can all adversely affect the erections.
- **Anatomical** - conditions affecting the physical structure of the penis. Examples are Peyronie's disease or priapism
- **Physical injury or surgery** to the penis, pelvis, or surrounding area may also lead to erectile dysfunction. This is particularly common with prostate cancer treatment.

Vasculogenic conditions

Vasculogenic conditions that commonly lead to erectile dysfunction include:

- **Diabetes** - This can affect both the blood flow and the nerve endings in the penis. Men with diabetes are up to three times more likely to experience ED during their lifetime than those who do not suffer from the metabolic disorder.
- **Hypertension (high blood pressure)** - where the blood pressure is higher than the recommended levels, causing damage to the penile arteries
- **Cardiovascular disease** - a condition that relates to the heart or the blood vessels. For example, atherosclerosis, which is a hardening of the arteries. There is a strong link between cardiovascular disease and erectile dysfunction.

- **Hyperlipidaemia** – high cholesterol levels can cause problems with penile blood flow.

Neurogenic conditions

Neurogenic conditions that commonly lead to erectile dysfunction include:

- **Parkinson's disease** - this condition interferes with the brain's coordination of the body, resulting in problems with walking, talking and hand movements
- **Stroke** - These occur when the blood supply to the brain is temporarily interrupted •
  Multiple sclerosis - this condition affects balance and movement.
- **Peripheral neuropathy** – common in diabetes, alcoholism, and following chemotherapy •
  Pelvic nerve damage – due to surgery or trauma

Hormonal conditions

Hormonal conditions that commonly lead to erectile dysfunction include:

- **Hypogonadism** - this condition relates to the level of testosterone in the body. Men with hypogonadism will have abnormally low levels of testosterone. This may develop spontaneously or after testicular injury or loss.
- **Hypothyroidism (underactive thyroid)** - this condition is caused by too little thyroid hormone being produced
- **Cushing's syndrome** - this condition affects the amount of cortisol in the body.

Psychological Causes of ED

Every man with erectile dysfunction experiences some psychological issues, but in some these are primary reasons for the problem:

- **Depression** - feeling extremely sad for a prolonged period of time, which may happen to any man, or may follow a stressful experience or illness
- **Anxiety** - an overwhelming sense of fear, unease or worry, again possibly primary or reactive.
- **Post traumatic stress disorder** (PTSD) – a common association is ED

In general, unless there is a major injury or a profound hormone problem, ascertaining the cause of ED is based on a holistic assessment of the patient. Physical tests are rarely helpful and from a forensic viewpoint are subject to interference by the subject, so are not often recommended.

Anatomic problems

Direct damage to the penis may cause scarring or blood flow problems. This can include damage to the perineum (the area between the anus and testicles) since blood vessels and nerves enter the penis at this level.

Pelvic fractures may affect blood or nerve supply to the penis