Artificial Urethral Sphincter Placement

An artificial urethral sphincter has more recently become available for use in dogs with urinary incontinence due to urethral sphincter mechanism incompetence (weak urethra). It consists of a silicone hydraulic occluder which is placed around the urethra and connected to a titanium subcutaneous injection port.

What does the procedure involve?

Under general anaesthesia, the device is placed around the urethra and connected to the subcutaneous port, which is fixed to the side of the prepuce. Once the skin is closed, no part of the device is visible; however the port will be palpable under the skin.

What aftercare is required?

Patients generally recover very quickly from this procedure, but are kept hospitalised overnight to monitor urination. They are discharged as soon as they are seen to have produced a normal stream of urine with no straining.

Initially the cuff is left empty, but if incontinence persists 4-6 weeks postoperatively, saline can be injected via the subcutaneous port to inflate the cuff and increase the resistance around the urethra. This procedure may or may not require sedation depending on the temperament of the dog.

What is the likely outcome?

Approximately 50% of dogs will achieve continence through placement of the port alone, with a further 20-40% significantly improved with cuff inflation. Approximately 10% of dogs will fail to achieve adequate continence with this surgery. In the long-term, regression is possible and further inflation of the cuff may be required to re-establish continence.

What are the potential complications?

Complications are relatively uncommon following this procedure; however 2 potential serious sequelae are infection of the artificial sphincter or urethral stricture formation, both of which would require removal of the device.