

Specialist Referral Service
Willows Information Sheets

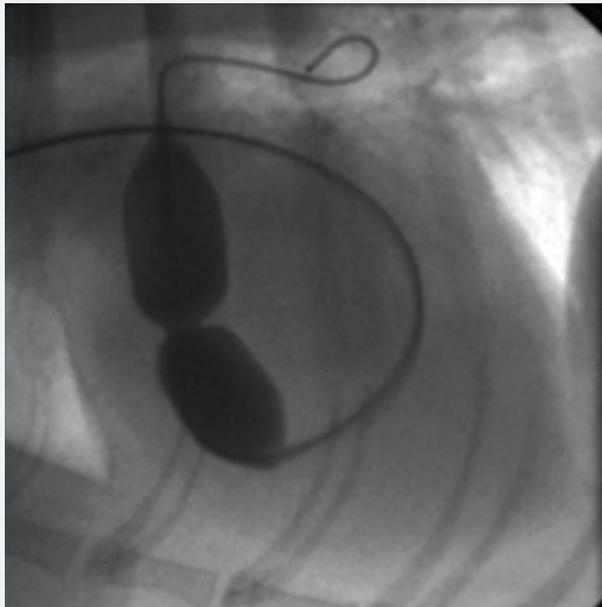
Balloon Catheter Dilatation of Pulmonic Stenosis



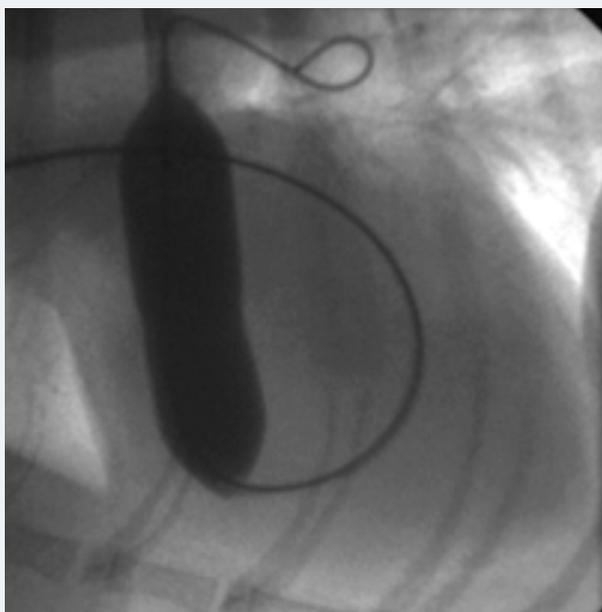
Balloon Catheter Dilatation of Pulmonic Stenosis

Pulmonic stenosis is the failure of the pulmonic valve to open fully, and as a consequence it creates a narrowing (or pinching) of blood flow through it. The obstruction caused by the narrowed valve leads to an overload of pressure in the muscular chamber of the right heart, and this can lead to heart failure or weakness/collapse on exertion.

Balloon dilatation (aka. valvuloplasty) involves passing a specially designed catheter via the vein in the neck or back leg ('keyhole' surgery) into the heart and through the narrowed valve. This sausage-shaped balloon is then inflated to stretch the defective valve, allowing it to open more normally. It is then deflated and removed. A number of contrast studies (angiograms) and pressure measurements are performed before and after balloon dilatation to assess the effectiveness. If there is an inadequate response, then a larger balloon catheter is used (but remaining within pre-calculated size safety limits).



These radiographic images show the balloon just before and then after full inflation and stretching open of the stenotic valve. The indent in the balloon on the left shows the tight constriction created by the narrowed valves.



This image then shows the balloon fully inflated, which stretches open the valves. The balloon is then deflated and removed. The pressures in the heart are then re-measured to check the success of the procedure.

The Veterinary Cardiorespiratory Centre is one of the few specialist centres in the UK to regularly perform balloon catheter dilatation interventions. Due to our considerable experience we have a good success rate and the long-term outcome is typically good. Anaesthesia is one area in which complications can arise, however we have a lot of experience in anaesthesia of these complicated cases.

The success rate is good with approximately 90% of cases showing a significant clinical improvement following surgery. The procedure is not without risk and a small number of patients (approx. 5 %) may not survive the procedure. Our cardiologists currently recommend pre-treating patients with beta blockers for some time before surgery, because in our experience this appears to minimise anaesthetic complications and can help alleviate heart muscle thickening.

Prior to referral for balloon dilatation of pulmonic stenosis

We prefer your pet to be on beta blockers for a week or two prior to the procedure and continue on that for 6 months after.

Before recommending balloon dilatation, a thorough ultrasound scan by our cardiologist is necessary to check the severity of the stenosis, to what extent heart function is reduced and to obtain measurements to assist in the decision of what size balloon catheter is required. Also to double-check for any other concurrent defects such as an abnormal coronary artery that would preclude such surgery.

A follow-up scan by our cardiologist will be performed after surgery to measure the degree of success of the procedure.

Long term management

A follow-up scan is also important 6 to 12 months later (for which there is an additional charge), beta blockers should be continued until that time (unless advised otherwise). Thereafter, depending upon the severity, the defect needs to be regularly monitored by ultrasound scan every couple of years.

Is your pet ready for a sterile procedure?

It might seem obvious, but for any sterile procedure it is important your pet is not dirty or has any skin infection (including fleas) that could contaminate the surgical site. Ask your vet to check for any infection that might be hidden under a thick coat, especially in the neck and inside the hind legs. If necessary, please bath your dog prior to your appointment.

Why should I bring my pet to Willows?

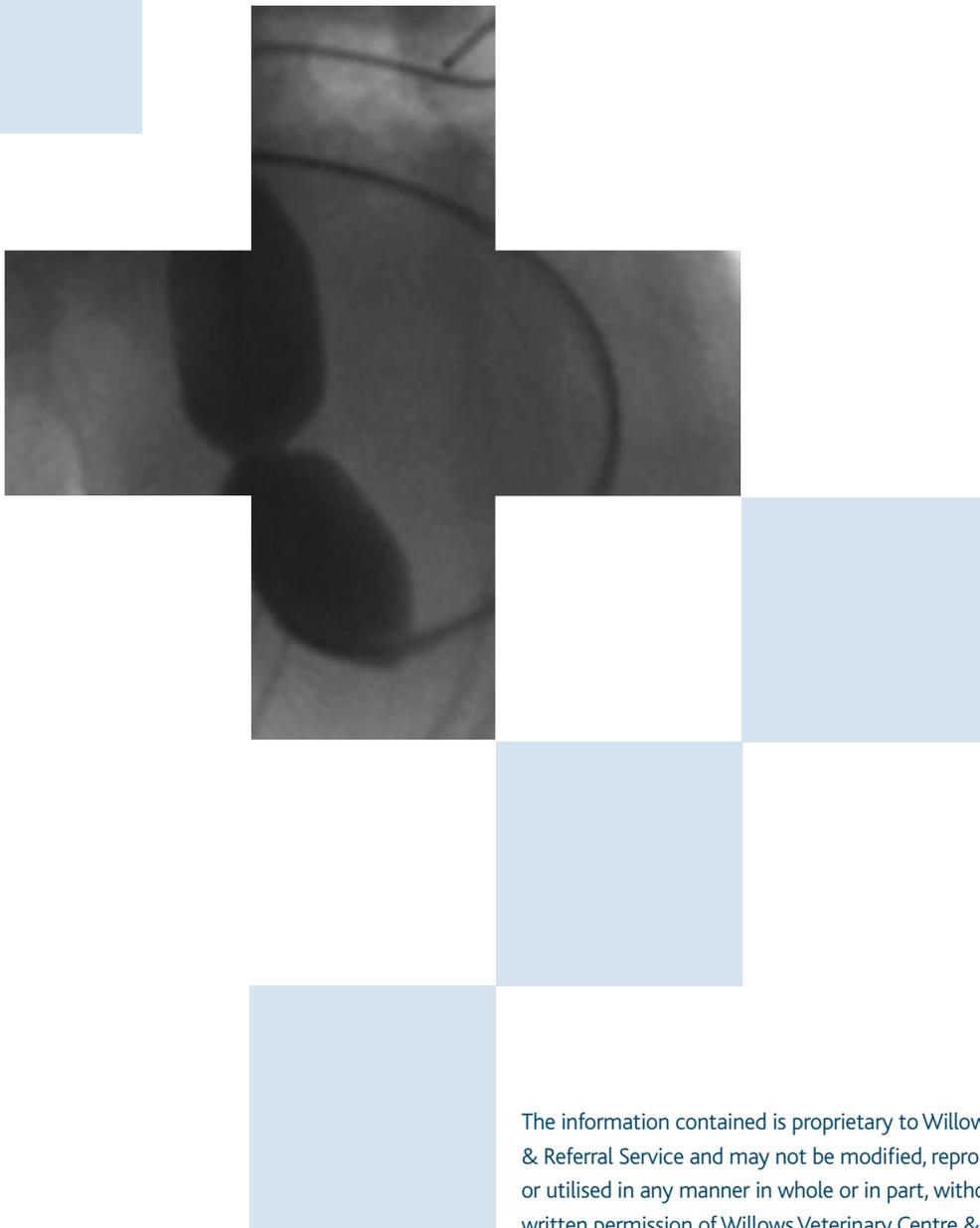
Our cardiology service is led by a team of [recognised, accredited cancer specialists](#) and we aim to provide the best possible care and treatment for your pet in our state-of-the art hospital.

Our cardiology team works closely with the [imaging Specialists](#) who run Willows [sophisticated imaging facilities](#), as well as with expert [anaesthesia and analgesia Specialists](#) and [24-hour veterinary and nursing staff](#), all of whom help to optimise the potential for our patients to make a full and uneventful recovery.

Who do I speak to if I have any questions?

If you have any questions at all, please call [Willows Veterinary Centre and Referral Service](#) on 0121 712 7070. We can also be contacted through our [emergency service](#) at any time if necessary.

Specialist Referral Service
www.willows.uk.net



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