Figure 4.1 Tracing of a normal dorsoventral angiocardiogram. The pulmonary veins (PV) enter the left atrium (LA) well within the limits of the cardiac silhouette; the left atrium does not contribute to the cardiac silhouette in the dorsoventral projection.
Figure 4.2 Right atrial injection angiocardiograms in a normal middle aged male Collie. In the dextrocardiogram two seconds after injection (A), the right atrial appendage (RAA), right ventricle (RV), and pulmonary arteries are opacified including the pulmonary sinus of Valsalva (PSV), main pulmonary artery (MPA), left pulmonary artery branch (LPA), and the right pulmonary artery branch (RPA). In the levocardiogram six seconds after injection (B), the pulmonary veins (PV), left atrium (LA), left ventricle (LV), ascending aorta (AA), brachiocephalic trunk (BT), and left subclavian artery (LSA) are opacified. The nonopacified aortic semilunar valves are also visible (arrows).
Figure 4.3 Left ventricular injection angiocardiogram in a fourteen-year-old male mongrel with mitral insufficiency due to chronic valve disease. The contrast medium was injected through the catheter positioned in the left ventricle (LV). One and one-half seconds following injection at this site, marked opacification of the dilated left atrium (LA) occurred indicating regurgitation of the contrast medium through the mitral valve.
Figure 4.4 A nine-year-old female Poodle with mitral insufficiency and endocardial splits but no pericardial effusion. In the lateral radiograph (A), the dorsoventral diameter of the cardiac silhouette is markedly increased. The left atrium is extremely enlarged in a dorsocaudal direction. In the dorsoventral radiograph (B), generalized cardiac enlargement is apparent. The prominence at the left cranial border of the heart is evidence of a particularly enlarged left atrial appendage.
Figure 4.5 Left ventricular injection angiocardiograms in a one-year-old male German Shepherd Dog with mitral insufficiency. In an angiocardiogram made during the injection (A), some of the contrast medium injected into the left ventricle (LV) has regurgitated through the mitral orifice (arrow) and partially opacified the dilated left atrium (LA). In an angiocardiogram made four seconds later (B), marked opacification of the left atrium can be seen including the dilated left atrial appendage (LAA, arrows) which extends ventrally over the right ventricular outflow tract region.
Figure 4.6 Left atrial appendage injection angiocardiograms in a two-year-old male mongrel dog with mitral insufficiency. The catheter was passed in a retrograde manner from the right carotid artery through the aortic valve, left ventricle, and mitral valve. After entering the left atrium, it was positioned in the left atrial appendage. In the lateral angiocardiogram (A), the dilated left atrial appendage (LAA) can be seen extending ventrally one-half of the dorsoventral length of the heart. The characteristic filling defects in the opacified left atrial appendage are caused by the pectinate muscles. The main body of the left atrium is also markedly dilated in this dog. In the dorsoventral angiocardiogram (B), the left atrial appendage protrudes laterally and accounts for the bulge in the cardiac silhouette observed in plain radiographs of this dog.
Figure 4.7 Serial lateral radiographs of a male Cocker Spaniel with mitral insufficiency diagnosed initially at 2 years of age. Progressive cardiac enlargement occurred and pulmonary edema was noted one week prior to death at nine years of age. A (top left), Oct. 1958; B (top right), Nov. 1962; C (bottom left), Jan. 1965; D (bottom right), Aug. 1965.
Figure 4.8 Serial dorsoventral radiographs of the dog illustrated in Figure 4.7 made on the same dates. A (top left), Oct. 1958; B (top right), Nov. 1962; C (bottom left), Jan. 1965; D (bottom right), Aug. 1965.
Figure 4.9 Dorsoventral (A) and slightly oblique radiographs (B) made the same day in August, 1964 of the dog in the previous two illustrations. In the true dorsoventral radiograph (A), left heart enlargement was apparent but no specific prominence of the left atrial appendage could be seen. In the slightly oblique radiograph, however, a left lateral prominence caused by left atrial enlargement was apparent (compare with next illustration).
Figure 4.10 Tracing of a dorsoventral angiocardiogram illustrating the relationship of a dilated left atrium and the cardiac silhouette. (Tracing made from the original angiocardiogram illustrated in Figure 3.7d).
Figure 4.11 Dorsoventral radiograph of a four-year-old male German Shepherd with patent ductus arteriosus and congestive heart failure. The prominence at the left craniolateral border of the cardiac silhouette was caused by a large left atrial appendage based upon observations made at surgery.