

GIANTURCO COIL IMPLANTATION FOR THE TREATMENT OF PATENT DUCTUS ARTERIOSUS IN 37 DOGS AND ONE CAT.

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Aim

To determine the efficacy of Gianturco PDA coil (Cook UK Ltd) implantation for the treatment of patent ductus arteriosus (PDA) in the dog and cat.

Method

Over a four year period (1997-2001) Gianturco PDA coils were placed in 37 dogs and one cat at two centres in the UK. A femoral transvenous or transarterial approach was used under routine general anaesthesia. The Seldinger method was employed for vascular access either by a percutaneous or a cut down method. Direct angiography was undertaken to assess ductus size and morphology. Detachable or non detachable coils were used based on ductus diameter on angiography. Multiple coils were used if necessary to stop shunting. All cases were auscultated for residual flow post-operatively.

Results

15 pure bred dog were represented, three cross breeds and one DSH cat. Of the 37 dogs, German shepherds (19%), Border collies (13%), Cavalier King Charles Spaniels (11%) and Springer Spaniels (8%) were over-represented. There was a higher percentage females (71%). The age range was 2.5-108 months (mean 19.1 months, median 7 months). The weight range was 2.9-34.8kgs (mean 12.2kg, median 9.25kg). In 69% of cases there was no history suggestive of cardiac failure. The range of ductus diameter on angiography was 3-10 mm (mean 6.36mm, median 5.4mm). The number of coils placed was between 1-4; 1 coil in 37% cases, 2 coils in 32%, 3 coils in 18%, 4 coils in 13%. Detachable coils alone were placed in 28 cases, non-detachable in 8 cases and a combination in one dog. Intra-operative complications included permanent loss of a coil into the pulmonary arterial system in one dog and loss of two coils into the systemic circulation in two dogs both of which were retrieved. Post operative complications included fatal haemorrhage in one dog and haematomas in a further 9 dogs, haemoglobinuria in one dog and mild transient lameness in 4 dogs. Post operative continuous murmurs were present in 21 dogs: 9 grade 1 murmur, 7 grade 2 and 5 grade 3.

Conclusion

Gianturco coil implantation is a safe effective procedure for closure of PDA in the dog and cat. In this study mild residual shunting was audible in 55% of cases immediately post operatively.