FIBREOPTIC GASTROSCOPY IN A GREY SEAL, *HALICHOERUS GRYPUS*

A. G. Greenwood MA VetMB MRCVS, Hainsworth House, Damems Lane, Keighley, West Yorkshire, U.K. and
D. Wild, Pyser Limited, Fircroft Way, Edenbridge, Kent, U.K.

Introduction

Fibreoptic endoscopy is now an accepted technique for the investigation of diseases of the upper gastro-intestinal tract in marine mammals (GREENWOOD and WILD 1975, HAGENBECK et. al. 1975, WIRTSCHAFTER 1977).
Unlike dolphins, pinnipeds require some form of sedation or anaesthesia for the protection of operators and equipment. This report describes gastroscopy in a sedated grey seal *(Halichoerus grypus).*

Case Report

A female grey seal, estimated age five years, which had been in captivity for four years developed lethargy and anorexia over a period of three weeks. When the animal became weaker and showed signs of weight loss and abdominal pain, the condition was investigated. Clinical examination showed no specific abnormalities, and blood values were normal except for some haemoconcentration (GREENWOOD et al. 1971). During the next seven days there was no response to antibiotic/corticosteroid/multivitamin therapy, and the seal was seen to retch and vomited a stone and a coin. Gastritis or retained gastric foreign body were suspected, and endoscopy was requested.

The seal which was a poorly developed specimen for its age, weighed an estimated 75 kg. It was restrained in a standard pinniped squeeze-cage, and although it was very subdued, sedation was required to open the jaws safely. 7.5 mg diazepam (Valium ; Roche) was given intravenously into the extradural intravertebral vein. Within three minutes the seal relaxed, closed its eyes and the jaws could be held open with towels. The full effect of the diazepam was seen for 30 minutes, during which time there was no struggling. The seal settled into the steady respiratory rhythm (12 breaths/minute) and heart rate (120-140 beats/minute) which are seen under ketamine anaesthesia (GERACI 1973), under halothane anaesthesia and in "rapid-heartbeat" sleep (RIDGWAY 1973). A metal tubular mouth guard was inserted and the fibrescope (Fuji 120 cm colonoscope type FC-QBF) passed into the stomach.
The oesophagus appeared normal. There was severe inflammation of the gastric mucosa and considerable bile reflux through the pylorus. The stomach contained only some small coins and a large metal screw which was removed with crocodile forceps. The foreign bodies were not considered to be significant, although they may have contributed to the acute gastritis. No true ulceration was seen. Local treatment with a liquorice preparation (Caved-S ; Cedona) and antacid mixture (Asilone ; Berk) was given by infusion through the fibrescope, and trimethoprim/sulphadiazine (Tribrissen ; Wellcome) given by injection. Oral treatment was continued by daily forcefeeding the seal with medicines in the fish, and the animal began to eat again after 10 days of

this treatment. A blood sample taken at the time of endoscopy showed that severe anaemia had developed.
The seal died suddenly about four weeks later, and an autopsy (by D. C. Taylor) showed that the gastritis was completely healed. Death was due to extensive myocardial degeneration, which may have resulted from the severe anaemia.

Conclusions

Physical restraint with the use of intravenous diazepam at 0.1 mg/kg gave excellent conditions for gastroscopy with minimum risk to a debilitated animal. Higher doses of this tranquilliser might be required for more active animals, and it may be given to effect by the intravenous route.

Acknowledgements

We thank D. C. Taylor BVMS, FRCVS for carrying out the autopsy, and the staff of Morecambe Marineland for their care of the animal.

References

GERACI J. R. (1973) An appraisal of ketamine as an immobilizing agent for wild and captive pinnipeds.
J. Amer. Vet. Med. Ass. 163: 574-577.

GREENWOOD A. G., S. H. RIDGWAY and R. J. HARRISON (1971) Blood values in young grey seals.
J. Amer. Vet. Med. Ass. 159: 571-574.

GREENWOOD A. G. and D. WILD (1975) Fibreoptic gastroscopy in dolphins.
Sixth Ann. Conference I.A.A.A.M. Amsterdam, April 1975.

HAGENBECK C. C., H. LINDNER and D. WEBER (1975) Fibreoptic gastroscopy in an anaesthetized walrus *(Odobenus rosmarus)*.
J. Aq. Ma. 3(2): 20-23.

RIDGWAY S. H. (1973) Control mechanisms in diving dolphins and seals.
Ph. D. thesis, University of Cambridge.

WIRTSCHAFTER M. Z. (1977) Successful recovery of a foreign body from the forestomach of a dolphin by peroral endoscopy.
Gastrointest. Endoscopy 23: 156-157.

— — —