

## Causes of newborn mortality in Devon Rex kittens

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### Introduction

Even in well-managed catteries, up to 16% of kittens may be stillborn and up to 20% of kittens may die before weaning.<sup>1</sup> The objective of this study was to identify gross pathology lesions in newborn purebred kittens who died spontaneously. We hypothesized that lesions consistent with congenital causes of mortality would be more common than infectious causes.

### Methods

Post-mortem examinations were performed on 17 newborn (up to 3 days old) Devon Rex kittens. The palate, heart, lungs, liver, spleen, kidneys, bladder, umbilical stump, and urogenital area were examined for abnormalities. A sample of lung tissue was floated in water to evaluate atelectasis, and urine was aspirated from the bladder to evaluate hematuria. The age at death, the dam's and sire's blood types, and clinical signs present before death were also recorded.

### Results

No gross pathological abnormalities were found in 17.6% (3/17) of the kittens. Of these kittens with no abnormalities, signs before death were hypothermia (n=1), dystocia (n=1), and dyspnea (n=2). There was one kitten with two signs before death, dystocia and dyspnea. A cleft palate was found in one kitten (5.8%), and no other congenital defects were found in the remaining kittens. No kittens died from neonatal isoerythrolysis. Hematuria (a sign associated with neonatal isoerythrolysis, NI) was present in 17.6% (3/17) of the kittens, and icterus (another sign associated with NI) was identified in one kitten. However, all four of these kittens were produced by blood type B sires, indicating that NI was not the cause.<sup>2</sup> Pyothorax was present in 35.3% (6/17) of the kittens, and dyspnea was reported in 4/6 of those kittens prior to death. One kitten with pyothorax had atelectasis.

### Discussion

About 13% of Devon Rex litters have at least one congenital defect, which is consistent our findings.<sup>3</sup> However, our findings revealed that 52.9% (9/17) of the kittens up to 3 days of age died from infectious causes (pyothorax and hematuria not associated with NI). Additional diagnostic testing is planned to determine the etiologic agents involved with the infectious causes of feline newborn mortality.

**Keywords:** Feline, mortality, necropsy, neonatal, perinatal

### References

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