species level and for providing new data about the emergence or reemergence of rickettsioses, as reported here. These assays are, however, time-consuming and only available in specialized reference laboratories.

Clinicians need to be aware of the presence murine typhus in Algeria, especially among patients with unspecific signs and fever of unknown origin. Tetracyclines remain the treatment of choice.

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and 2b/2c assays, and MGB probes specific for type 2a (type 2a/2b assay) and type 2c (type 2b/2c assay) were labeled with VIC.

All specimens from 1 dog (PT-32/07) were positive for the 2 variants of CPV type 2 (CPV 2b and CPV 2c). Conversely, of the 3 littermates, 2 were positive for CPV type 2b and 1 was positive for CPV type 2c in all samples (Table).

A conventional PCR and RFLP analyses were performed by using the method of Buonavoglia et al. with known positive CPV-2b and CPV-2c samples as controls to confirm our findings. The 583-bp PCR product obtained from the coinfected dog by using primer pair 555for/555rev was digested with MboII. Digestion generated 2 fragments (≈500 and 80 bp) in all dog samples. The CPV-2c control sample showed 2 fragments (≈500 and 80 bp), and CPV-2b control sample was not digested with MboII.

We report CPV-2b and CPV-2c variants in samples from a dog with littermates that were positive for CPV-2b or CPV-2c during an episode of gastrointestinal disease. Co-infection with multiple CPV variants that showed high genetic diversity in the VP2 gene has recently been reported in a domestic cat. Continuous and rapid evolution of CPV may cause serious problems in diagnostic testing and vaccine efficacy. Antigenic variation may negatively affect vaccine efficacy if changes occur at major antigenic sites. Thus, continuous monitoring for novel genetic and antigenic virus types is needed. Additional studies are in progress to characterize nucleotide sequences of all CPV isolates from this case.

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Table. Detection by minor groove binder probe assay of CPV antigenic variants in different specimens from dogs from the same litter (10 weeks old), Portugal, 2006

| Dog      | Vaccines | Rapid test result for CPV | Days in clinic | Clinical course | Samples | TagMan probe |
|----------|----------|---------------------------|----------------|-----------------|---------|--------------|
|          |          |                           |                |                 |         | FAM a/b       | FAM b/c | VIC a/b | VIC b/c | CPV    |
| PT-15/07 | None     | –                         | 7              | Recovered       | Feces   | +            | +       | –       | –       | 2b     |
|          |          |                           |                |                 | Lingual swab | +        | –       | –       | –       | 2b     |
|          |          |                           |                |                 | Serum   | +            | +       | –       | –       | 2b     |
| PT-16/07 | None     | +                         | 7              | Recovered       | Feces   | +            | +       | –       | –       | 2b     |
|          |          |                           |                |                 | Lingual swab | +        | –       | –       | –       | 2b     |
|          |          |                           |                |                 | Serum   | +            | +       | –       | –       | 2b     |
| PT-17/07 | None     | +                         | 7              | Recovered       | Feces   | –            | –       | –       | –       | 2c     |
|          |          |                           |                |                 | Lingual swab | –        | –       | –       | –       | 2c     |
|          |          |                           |                |                 | Serum   | –            | –       | –       | –       | 2c     |
| PT-32/07 | None     | –                         | 7              | Recovered       | Feces   | +            | +       | –       | –       | 2b/2c  |
|          |          |                           |                |                 | Lingual swab | +        | –       | –       | –       | 2b/2c  |
|          |          |                           |                |                 | Serum   | +            | +       | –       | –       | 2b/2c  |

*CPV, canine parvovirus.