

## Leptospirosis: recent incidents and available diagnostics – a review

### **ABSTRACT**

**Objective:** The aim of this article was to review published research articles on leptospirosis, in particular the recent incidence of leptospirosis in Malaysia and the currently available diagnostic methods for the detection of leptospirosis.

**Methods:** PubMed, Google Scholar and Google Search databases were searched using the key words *Leptospira* and leptospirosis. A total of seventy-six references were reviewed including sixty-seven research articles, three annual reports from Ministry of Health and six online newspaper articles. This review includes the following five sub-headings: introduction, leptospirosis transmission, leptospirosis incidents, laboratory diagnosis of leptospirosis and treatment and prevention of leptospirosis.

**Results:** An increase in incidents of leptospirosis cases has been seen in recent years in Malaysia. The recent floods have contributed to the rise in the number of reported cases. Current diagnostic approaches such as dark field microscopy, microscopic agglutination test (MAT), Polymerase chain reaction and serological tests are inadequate as the organism is a slow grower.

**Conclusion:** There is an urgent need to develop newer techniques for rapid detection of leptospirosis. The combination of PCR and ELISA are suggested for rapid and accurate diagnosis of leptospirosis. Studies on the mechanism of pathogenesis of *Leptospira* are needed for the development of vaccines that are safe for human use.