INTISARI

**Kajian Longitudinal *Brucellosis* Di Peternakan Sapi
Berisiko Tinggi Dan Identifikasi Potensi Risiko
Penyebarannya Di Kota Metro Lampung**

Ruri Astuti Wulandari

21/489428/PKH/00784

Sejak tahun 2011, Lampung merupakan salah satu wilayah bebas *brucella*, namun April 2021 dilaporkan terjadi kasus keluron/abortus di sebuah peternakan sapi di Kota Metro Lampung. Tujuan dari penelitian ini adalah untuk mengukur tingkat insidensi di sebuah peternakan berisiko tinggi dan mengidentifikasi potensi risiko penyebaran *Brucellosis* di Kota Metro Provinsi Lampung. Sampel berupa serum sapi diambil secara sensus dari seluruh ternak sapi yang ada di peternakan berisiko sebanyak 2 kali dengan jarak sekitar 1 bulan. Pada sensus pertama diambil sebanyak 703 sampel serum dari peternakan tersebut dan 25 sampel dari peternak yang berdekatan/berbatas langsung. Seluruh sampel diuji terhadap *Brucella spp* dengan menggunakan uji *rose bengal test* (RBT) dan hasil yang positif dikonfirmasi dengan uji *complement fixation test* (CFT). Sensus kedua dilakukan pada sampel tanpa hasil CFT positif di sensus pertama. Hasil RBT sensus kedua yang positif dilanjutkan dengan uji CFT dan c-Elisa. Penghitungan faktor risiko yang menjadi fokus penelitian adalah jenis ternak, jenis kelamin, umur dan status vaksinasi. Hasil pengujian sensus I RBT seropositif 11,38% (80/703) dan 92,2% (648/703) seronegatif. Uji RBT untuk serum kandang yang berdekatan adalah 0. Hasil seropositif CFT 92,5% (74/80) dan seronegatif CFT 7,5% (6/80). Pada sensus kedua, seropositif RBT 3,8% (24/616) dan seronegative 96,1% (592/616). Sebanyak 24 sampel positif RBT dilanjut uji CFT dan uji c-Elisa. Hasil uji CFT positif 79% (19/24) dan negatif 20,8% (5/24). Hasil c-Elisa positif 45% (11/24) dan negatif 54% (13/24). Prevalensi *Brucellosis* pada peternakan berisiko tinggi di Kelurahan Banjarsari Kecamatan Metro Utara Kota Metro 1,7% dan tingkat insidensi 1,8% atau 18 *Brucellosis* per 1000 hewan bulan. *Brucella spp.* seropositif secara signifikan terkait dengan jenis spesies dan jenis kelamin hewan; hewan dengan spesies Peranakan Ongole 4,2 kali dan hewan betina 4,5 kali memiliki tingkat paparan yang lebih tinggi dibandingkan dengan hewan non Peranakan Ongole dan jantan. Tidak ada asosiasi antara penyakit *Brucellosis* dengan umur.

Kata kunci : *Brucellosis, faktor risiko, prevalensi, sensus ternak*

ABSTRACT

Longitudinal Study of Brucellosis in a High Risk Cattle Farm And Identify The Spread of Potential Risks in Metro City Lampung

Ruri Astuti Wulandari
21/489428/PKH/00784

Since 2011, Lampung has been a brucella-free area, but in April 2021, a case of abortion/abortion was reported on a cattle farm in Lampung Metro City. The aim of this study was to measure the incidence rate in a high-risk farm and identify the potential risk of spreading Brucellosis in the Metro City of Lampung Province. Samples in the form of bovine serum were taken by census from all cattle on at-risk farms 2 times with a distance of about 1 month. In the first census, 703 serum samples were taken from the farm and 25 samples from breeders who were adjacent/bordered directly. All samples were tested for Brucella spp using the rose bengal test (RBT) and positive results were confirmed using the complement fixation test (CFT). The second census was carried out on samples without positive CFT results in the first census. The positive second census RBT results were followed by the CFT and c-Elisa tests. The risk factor calculations that are the focus of the research are livestock type, gender, age and vaccination status. The results of the I RBT census testing were 11.38% (80/703) seropositive and 92.2% (648/703) were seronegative. The RBT test for adjacent cage serum was 0. CFT seropositive results were 92.5% (74/80) and CFT seronegative results were 7.5% (6/80). At the second census, RBT seropositivity was 3.8% (24/616) and seronegative 96.1% (592/616). A total of 24 RBT positive samples were followed by the CFT test and c-Elisa test. CFT test results were positive in 79% (19/24) and negative in 20.8% (5/24). The c-Elisa results were positive in 45% (11/24) and negative in 54% (13/24). The prevalence of Brucellosis in high-risk farm in Banjarsari Village, North Metro District, Metro City is 1.7% and the incidence rate is 1.8% or 18 Brucellosis per 1000 animals per month. Brucella spp. seropositivity was significantly associated with species type and animal sex; animals with the Ongole crossbreed species 4.2 times and female animals 4.5 times had higher levels of exposure compared to non-Ongole crossbreed animals and males. There is no association between Brucellosis and age.

Key words: Brucellosis, risk factors, prevalence, livestock census