

INTISARI

NURWARDANI, M., 2013., UJI SENSITIVITAS ANTIBIOTIK ERITROMISIN, PENISILIN G, SIPROFLOKSASIN, DAN TETRASIKLIN TERHADAP BAKTERI *Streptococcus sp* tipe beta hemolyticus DARI ISOLAT SUSU SAPI PENDERITA MASTITIS DI KABUPATEN BOYOLALI PADA BULAN FEBRUARI - APRIL. SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Peradangan pada ambung atau mastitis menyebabkan susu yang dihasilkan oleh sapi mengandung berbagai macam mikroba pathogen seperti *Streptococcus sp* tipe beta hemolyticus. Penelitian ini dilakukan untuk mengetahui pola resistensi bakteri *Streptococcus sp* tipe beta hemolyticus serta mengetahui antibiotik yang sensitif digunakan pada pengobatan mastitis subklinis.

Metode pada penelitian ini meliputi pengambilan sampel susu di peternakan sapi perah Kabupaten Boyolali pada bulan Februari – April 2013. Pengambilan sampel susu dilakukan secara aseptis. Pengujian sampel susu dilakukan di Laboratorium Mikrobiologi Universitas Setia Budi. Sampel susu positif mastitis subklinis dikultur dalam agar darah untuk diperiksa koloni yang tumbuh. Koloni yang diduga *Streptococcus sp* tipe beta hemolyticus di uji kembali dengan uji mikroskopis, katalase, koagulase dan uji sensitivitas bakteri terhadap beberapa antibiotik yang berbeda, yaitu antibiotik eritromisin, penisilin G, siprofloksasin, dan tetrasiklin.

Hasil penelitian diketahui bahwa Pertama, dari 20 sampel isolat susu sapi yang terinfeksi mastitis dinyatakan positif mengandung bakteri *Streptococcus sp* tipe beta hemolyticus. Kedua, pola sensitivitas antibiotik eritromisin terhadap bakteri *Streptococcus sp* tipe beta hemolyticus berturut-turut adalah 5 % resisten, 15 % intermediate, dan 80 % susceptible. Pola sensitivitas antibiotik penisilin G terhadap bakteri *Streptococcus sp* tipe beta hemolyticus berturut-turut adalah 10 % resisten, 33.3 % moderately susceptible, 56.7 % susceptible. Pola sensitivitas antibiotik siprofloksasin terhadap bakteri *Streptococcus sp* tipe beta hemolyticus berturut-turut adalah 5 % resisten, dan 95 % susceptible. Pola sensitivitas antibiotik tetrasiklin terhadap bakteri *Streptococcus sp* tipe beta hemolyticus berturut-turut adalah 11.7 % resisten, 3.3 % intermediate, dan 85 % susceptible. Ketiga, dari keempat antibiotik yang paling sensitif dalam menghambat pertumbuhan bakteri *Streptococcus sp* tipe beta hemolyticus penyebab mastitis adalah antibiotik siprofloksasin.

Kata kunci: mastitis subklinis, *Streptococcus sp* tipe beta hemolyticus, resisten antibiotik

ABSTRACT

NURWARDANI, M., 2013., SENSITIVITY TEST OF ERYTHROMYCIN, PENICILLIN G, CIPROFLOXACIN, AND TETRACYCLINE ANTIBIOTICS TO *Streptococcus sp* tipe beta hemolyticus FROM DAIRY ISOLATE OF COW WHICH SUSTAIN MASTITIS AT BOYOLALI IN FEBRUARY - APRIL. THESIS, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA.

Inflammation in udder or mastitis causing the milk produced by cow contains various microbial pathogens such as *Streptococcus sp* type beta hemolyticus. This study was conducted to determine the resistance patterns of *Streptococcus sp* type beta hemolyticus and determine the antibiotic which sensitively used in subclinical mastitis treatment.

The method in study include dairy sampling at Boyolali milch cow farm in February-April 2013. Dairy sampling was done in aseptic. Dairy samples testing in the Microbiology Laboratory of Setia Budi University. Positive subclinical mastitis dairy samples were cultured in blood agar to be examined in growing colonies. Colonies which suspected as *Streptococcus sp* type beta hemolyticus was retested by microscopic, catalase, coagulase and sensitivity bacteria tests to several antibiotics, which are erythromycin, penicillin G, ciprofloxacin, and tetracycline antibiotics.

The results know that, first, from 20 samples of dairy isolate infected mastitis stated positive for *Streptococcus sp* type beta hemolyticus. Second, the antibiotic sensitivity pattern of erythromycin against *Streptococcus sp* type beta hemolyticus were 5% resistant, 15% intermediate, and 80% susceptible, respectively. The sensitivity pattern of Penicillin G antibiotic against *Streptococcus sp* type beta hemolyticus were 10% resistant, 33.3% moderately susceptible, 56.7% susceptible, respectively. The sensitivity pattern of Ciprofloxacin antibiotic against *Streptococcus sp* type beta hemolyticus were 5% resistant and 95% susceptible, respectively. The sensitivity pattern of Tetracycline antibiotic against *Streptococcus sp* type beta hemolyticus were 11.7% resistant, 3.3% intermediate, and 85% susceptible, respectively. Third, from four antibiotics the most sensitive to inhibit *Streptococcus sp* type beta hemolyticus growth causing mastitis was ciprofloxacin antibiotic.

Keywords: subclinical mastitis, *Streptococcus sp* type beta hemolyticus, antibiotic-resistant