

DIAGNOSIS *FELINE LOWER URINARY TRACT DISEASE* (FLUTD) SECARA KLINIS DAN LABORATORIS

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Intisari

Feline Lower Urinary Tract Disease (FLUTD) merupakan istilah umum penyakit pada saluran perkencingan dengan berbagai macam gangguan yang dapat disertai dengan obstruksi atau tanpa obstruksi. Berbagai macam gangguan FLUTD seperti *Feline Idiopathic Cystitis* (FIC), *Urethral Plugs* (UP), urolithiasis, neoplasia saluran urinaria, kelainan anatomi pada saluran urinaria, dan *Urinary Tract Infection* (UTI). Tujuan dari penelitian ini adalah mengidentifikasi gambaran klinis dan laboratoris pemeriksaan leukosit, urin serta identifikasi bakteri pada urin pasien FLUTD. Penelitian ini menggunakan 15 ekor yang menunjukkan gejala gangguan sistim urinari. Semua kucing pada penelitian ini diperiksa secara fisik meliputi anamnesa, pemeriksaan klinis, dan pemeriksaan laboratoris meliputi pemeriksaan VU dengan USG, pemeriksaan urin dan total leukosit serta kultur bakteri urin. Hasil penelitian menunjukkan bahwa diagnosa FLUTD yang didapatkan disebabkan gabungan kristaluria, UP, dan UTI 53,33%, gabungan kristaluria dan UTI 26,67%, UTI 6,67%, kristaluria 6,67%, FIC 6,67%. Gejala klinis pada FLUTD yang terlihat adalah hematuria 100%, stranguria 86,67%, pollakiuria 53,33%, dysuria 46,67%, dan distensi vesika urinaria (VU) 60%. Rata-rata usia pasien FLUTD berusia 2 tahun, berat badan rata-rata 3,7 kg, jenis kelamin jantan (73,3%), jenis kelamin betina (26,67%), ras campuran Persia (60%), dan ras domestic (40%). Hasil pemeriksaan leukosit dengan nilai difrensial absolut yang dominan terlihat pada pasien FLUTD yaitu leukositosis (60%), neutrofilia (60%), limfosit normal (60%), monosit normal (53,33%), eosinophil normal (60%). Hasil pemeriksaan sedimen urin ditemukan struvit dan kalsium oksalat, sedangkan pada pemeriksaan USG terlihat hiperekoik di dalam VU yang dapat disertai penebalan dinding VU. Hasil identifikasi bakteri didapatkan beberapa jenis bakteri *E. coli*, *Staphylococcus sp.*, *Streptococcus sp.*, *Staphylococcus felis*, *Pseudomonas sp.*, *Klebsiella sp.*, *Proteus sp.*, *Streptococcus uberis*, *Streptococcus epidermidis*. Disimpulkan bahwa diagnosis FLUTD dapat ditentukan berdasarkan gejala klinis hematuria, stranguria, pollakiuria, dysuria, dan distensi vesika urinaria dan diperkuat pemeriksaan USG VU, kristal struvit dan kalsium oksalat dan diidentifikasinya bakteri Gram negatif dan atau positif.

Kata kunci: bakteri, diagnosis, FLUTD, gejala klinis, kristal

DIAGNOSIS OF FELINE LOWER URINARY TRACT DISEASE (FLUTD) CLINICAL AND LABORATORY ASPECTS

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Abstract

Feline Lower Urinary Tract Disease (FLUTD) is a broad terminology for urinary tract problem with various kinds of disorders which may be followed by obstruction or without obstruction. Various kinds of FLUTD disorders such as Feline Idiopathic Cystitis (FIC), Urethral Plugs (UP), urolithiasis, neoplasia of the urinary tract, anatomical abnormalities in the urinary tract, and Urinary Tract Infection (UTI). The purpose of this study was to identify the clinical and laboratory aspect of leukocytes, urine and identification of bacteria in the urine of FLUTD patients. This study used 15 cats that showing urinary system disorders symptoms. All cats in this study were physically examined including anamnesis, clinical examination, and laboratory examinations including VU examination by ultrasound, urine examination, examination of total leukocytes and urine bacterial culture. The results showed that the diagnosis of FLUTD consist of combined and single diagnosis, combined diagnosis of crystalluria, UP, and UTI (53.33%), a combined diagnosis of crystalluria and UTI (26.67%), UTI (6.67%), crystalluria (6.67%), FIC (6.67%). The clinical signs of FLUTD are hematuria (100%), stranguria (86.67%), pollakiuria (53.33%), dysuria (46.67%), and bladder distension (VU) (60%). The average age of FLUTD patients is 2 years old, body weight average is 3.7 kg, male sex (73.3%), female sex (26.67%), mixed Persian breed (60%), and domestic breed (40%). Leukocyte examination results with absolute differential value in FLUTD patients showed leukocytosis (60%), neutrophilia (60%), normal lymphocytes (60%), normal monocytes (53.33%), normal eosinophils (60%). Struvite and calcium oxalate found in urine sediment examination, whereas on VU ultrasound examination showed more hyperechoic which could be followed by thickening of the VU wall. *E. coli*, *Staphylococcus sp.*, *Streptococcus sp.*, *Staphylococcus felis*, *Pseudomonas sp.*, *Klebsiella sp.*, *Proteus sp.*, *Streptococcus uberis*, *Streptococcus epidermidis* were found in urine bacterial identification, which can be caused by one or two types of bacteria. It was concluded that the diagnosis of FLUTD can be determined based on clinical symptoms of hematuria, stranguria, pollakiuria, dysuria, and bladder distension and confirmed by ultrasound examination of the VU, struvite crystals and calcium oxalate and identification of Gram negative and or positive bacteria.

Keywords: bacteria, clinical symptoms, crystals, diagnosis, FLUTD