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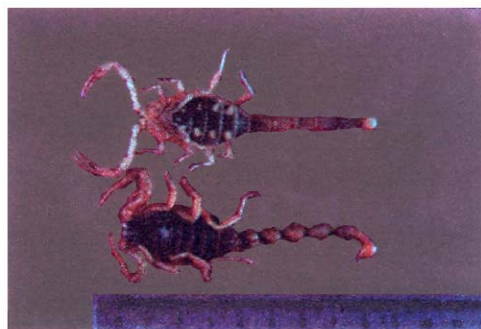
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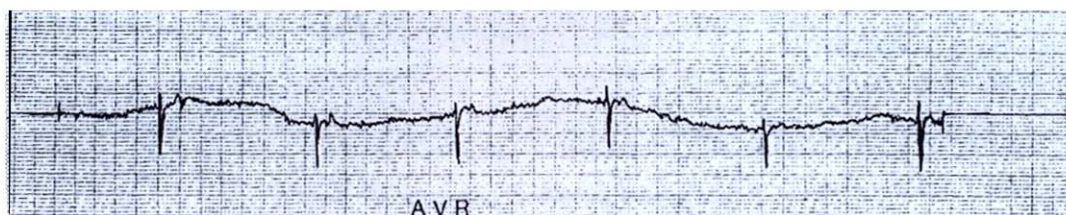
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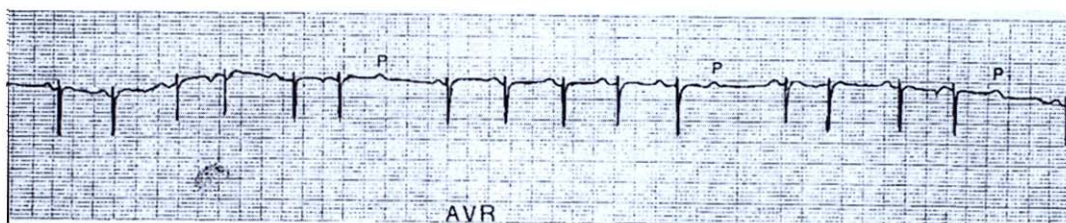
تصویر ۱: عقرب ادنتوبوتوس دورویه



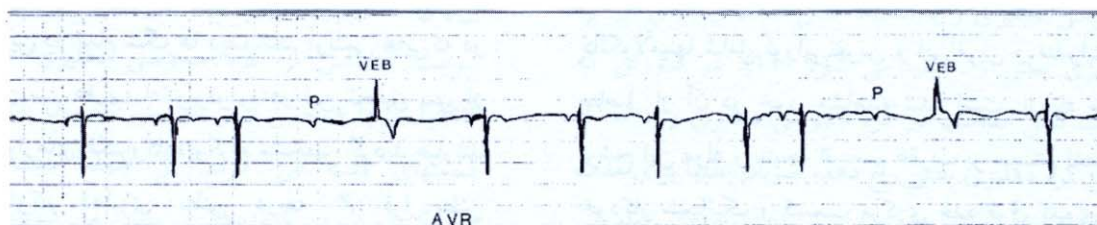
تصویر ۲: آریتمی سینوسی (نرمال) در سگ های سالم



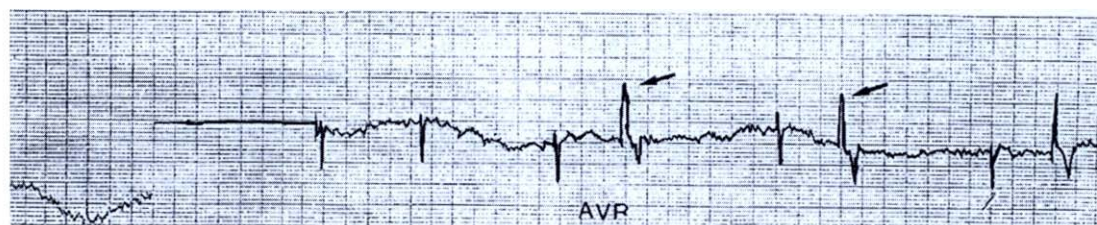
تصویر ۳: برادی کاردی شدید ۹۰ دقیقه پس از تزریق سم.



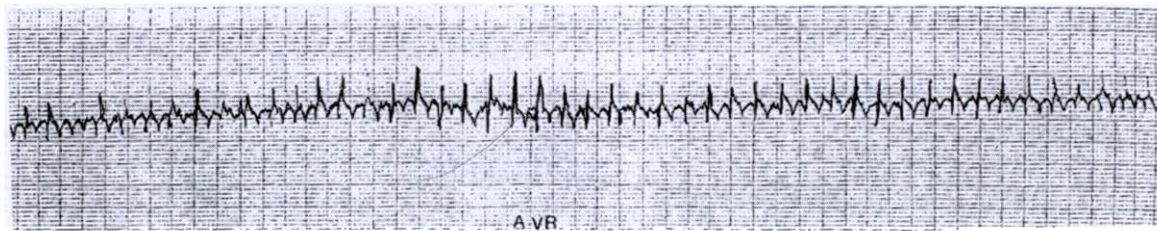
تصویر ۴: بلوک دهلیزی بطنی درجه ۲ در ۳۰ دقیقه پس از تزریق سم.



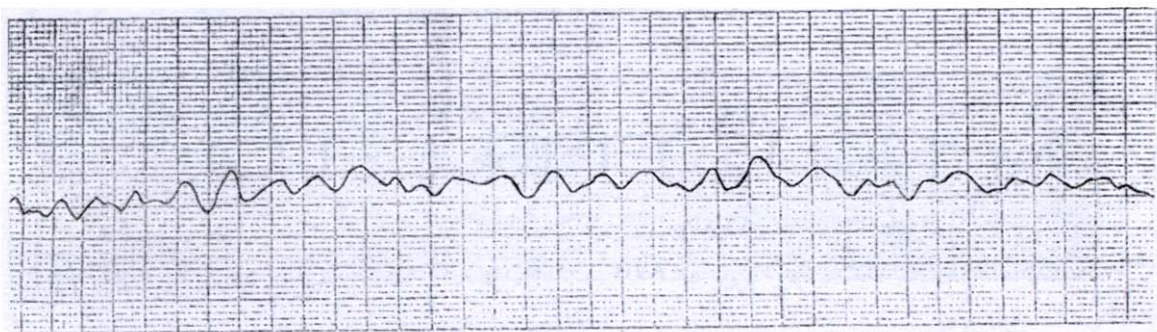
تصویر ۵: فرار بطنی (Ventricular escape) و بلوک دهلیزی بطنی درجه ۲ در ۳۰ دقیقه پس از تزریق سم.



تصویر ۶: انقباضهای زودرس بطنی ۱۸۰ دقیقه پس از تزریق سم.



تصویر ۷: تاکیکاردی بطنی ۶۰ دقیقه پس از تزریق سم.



تصویر ۸: فیبرولاسیون بطنی در دقیقه ۹۰.

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References :

1. : ()
2. Fowler ME. Veterinary zootoxicology. CRC Press. Inc. Boca Racton, 1993, 81-87.
3. Sherman MA. Venom Disease. Springfield, Illinois, Charles, Thomas, Pub, 1974, 27-37.
4. - - - -
5. Dehesa-Davila, M. Possani LD. Scorpionism and serotherapy in Mexico. Toxicon 1994; 32: 1015-1018.
6. Radmanesh M. *Androctonus Crassicauda* sting and its clinical study in Iran. J Trop Med Hyg 1990; 93: 323-326.
7. Parrish HM. Analysis of 460 fatalities from venomous animals in the United States. Am J Med Sci 1963; 245: 129-141.
8. Tiwary AK, Deshpande S B. Toxicity of scorpion (*Buthus tamulus*) venom in mammals is influenced by the age and species. Toxicon 1993; 31: 1619-1622.
9. - -
10. Amaral CFS, Barbosa AJA, Leite VH. R, et al. Scorpion sting-induced pulmonary oedema: evidence of increased alveolocapillary membrane permeability. Toxicon 1994; 32: 999-1003.
11. Bawaskar HS, Bawaskar PH. Cardiovascular manifestations of severe scorpion sting in India (review of 34 children). Ann Trop Paediat 1991; 11: 381-387.

12. Bawaskar HS, Bawaskar PH. Treatment of cardiovascular manifestations of human scorpion envenoming: is serotherapy essential? J Trop Med Hyg 1991; 94: 156-158.
13. Bawaskar HS, Bawaskar PH. Role of atropine in management of cardiovascular manifestations of scorpion envenoming in humans. J Trop Med Hyg 1992; 95: 30-35.
14. Bawaskar HS, Bawaskar PH. Management of the cardiovascular manifestations of poisoning by the Indian red scorpion (*Mesobuthus tamulus*). Br Heart J 1992. 68: 478-480.
15. Ismail M, Fatani AJY, Dabees TT. Experimental treatment protocols for scorpion envenomation: a review of common therapies on effect of kallikrein-Kinin inhibitors. Toxicon 1992;30:1257-1279.
16. Kumar EB, Al-Hamdani A, El. Shimy N. Scorpion venom cardiomyopathy. Am Heart J 1992; 123: 725-729.
17. Murthy KRK, Shenoi R, Vaidyanathan P, et al. Insulin reverses haemodynamic changes and pulmonary oedema in children stung by the Indian red scorpion *Mesobuthus tamulus* Concanesius pocock. Ann. Trop Med Parasitol 1991; 85: 651-657.
18. Gateau T, Bloom M, Clark R. Response to specific *Cetrurides sculpturatus* antivenom in 151 cases of scorpion stings. J Toxicol Clin Toxicol 1994; 32: 165-171.
19. Guyton AC. Textbook of Medical Physiology. 9th ed. W. B. Saunders: Philadelphia, 1996, 121-158.
20. Amaral CFS, Lopes JA, Magalhaes R A, et al. Electrocardiographic, enzymatic and echocardiographic evidence of myocardial damage after *Tityus serrulatus* scorpion poisoning. Am J Cardiol 1991; 67: 655-657.
21. Freire-Maia L, Campos JA, Amaral C FS. Approaches to the treatment of scorpion envenoming. Toxicon 1994;32: 1009-1014.
22. Gueron M, Ovsyshcher I. What is the treatment for the cardiovascular manifestations of scorpion envenomation. Toxicon 1987; 25: 121-125.
23. Murthy K, Radha K, Hase NK. Scorpion envenomation and the role of insulin. Toxicon 1994; 32: 1041-1044.
24. Poon-King T. Myocarditis from scorpion stings. Br Med J 1963; 1: 374-377.
25. Radmanesh M. Clinical study of *Hemiscorpion lepturus* in Iran J Trop Med Hyg 1990; 93: 327-332.