

Detection of Staphylococcus contamination and some biochemistry and cellular factors in joint fluid of equines Suspected to infection Arthritis

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Synovial fluid is composed of plasma ultrafiltration and hyaluronic acid secretion by synovial cells. The amount of synovial fluid is so minute even in big joint like knee which contain no more than 4 milliliter. Synovial fluid play role as softener and feeding cartilages without vessels. Infectious arthritis is one of the commonest arthritis and if the disease did not cure in the first days it would injure cartilages irreversibly. Acute bacterial infections could damage synovial cartilages in less than 48 hours. In this research synovial fluid contamination with Escherichia coli and biochemical parameters such as the amount of glucose, protein and the number of white blood cells were studied. For this, 25 cerebrospinal fluid samples were tested which out of them 9 of samples were contaminated with bacteria including: 5 of isolates were Staphylococcus aureus, 1 of them were coagulase negative Staphylococci, 1 of them were Streptococcus and 2 of them were Escherichia coli. results showed that the amounts of glucose in positive samples in comparison to the amount of glucose in synovial fluid were significantly decreased. The amount of protein and the number of white blood cells in synovial fluid of positive samples were significantly higher in comparison to normal synovial fluid. All of these findings are indicative of bacterial arthritis.

Keywords : Synovial fluid, Arthritis, Staphylococcus coagulase negative, PCR.

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