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Title: The novel method for isolation and taxonomy of Listeria monocytogenes from raw milk in Lahijan region of Guilan province

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Abstract: Background and objectives:
Listeria monocytogenes is a food-borne pathogen that causes a listeriosis. It has been isolated from foods such as raw and pasteurized milk, cheeses, and the other foods. The objective is the isolation Listeria monocytogenes from raw milk, identify and describe the diagnostic problems.

Materials & Methods
samples of raw milk were collected at Lahijan region, were stored at 4°C and analyzed within 2-hr. Detection of L. monocytogenes is performed in two-step cultural enrichment process and performance the biochemical identification of a L. monocytogenes suspicious colony is completed.

For first step, samples were made in 3 delution, homogenized with 10ml sterile Listeria enrichment broth and incubated at 37°C for 24-hr. The second step, were cultured on Listeria selective agar then CHROMagar media and incubated at 37°C for 24-hr. For doing the biochemical tests, colonies were transferred on TSYE agar that is an excellent substrate for cultivation and preservation of the bacterium.

Result
Morphologically typical of Listeria monocytogenes is short rod or cocobacilli, nonsporeforming, diphtheroid-like rod. It is confused with members of the genus Corynebacterium. Smears from 15-to 24-hr-old colonies show typical diphtheroid palisade formation with some V and Y forms, and a few diplococcoid forms or actual cocci. In 24-to 36-hr old colonies, examination of older cultures or broth cultures often reveals gram-negative cells. All of the biochemical tests were ok.
L. monocytogenes is moving at 20-25°C and not moving at 37°C, so CO2 impress the motion. 90% of the cells incubated at 37°C were nonflagellate whereas 20% of those incubated at room temperature were nonflagellate.

Conclusion:
Colonies on blood-agar may have a narrow zone of β hemolysis. This research show that some times hemolysis is intense, reason of this may be because the strain that isolated has high virulence, or narrow zone is pronounced in freshly isolated cultures and may be completely absent in old. L. monocytogenes on blood agar freshly is coccoid form.
Thus, due to its characteristics, identification of L. monocytogenes and working with it, is difficult

Listeriosis, Listeria monocytogenes, Diagnostic problems

Presentation: Poster