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利福平对脓肿分枝杆菌L型的诱导作用(PDF)分享到:

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Title: Induction of rifampicin to L-Forms of *Mycobacterium abscessi*

作者: 范贵荣; 杨致邦; 黄进
重庆医科大学基础医学院病原生物学教研室，基础医学实验教学中心，病原生物学与免疫实验室

Author(s): Fan Guirong; Yang Zhibang; Huang Jin
Department of Pathogenic Biology, Experimental Teaching Center of Basic Medicine, Laboratory of Pathogenic Biology and Immunology, College of Basic Medical Sciences, Chongqing Medical University, Chongqing, 400016, China

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摘要: 目的 探讨利福平对脓肿分枝杆菌L型的诱导作用。 方法 将脓肿分枝杆菌分别接种于含256 μg/mL利福平和无利福平的结核分枝杆菌快速液体培养基中培养。含利福平的培养物经0.45 μm孔径滤膜过滤，滤液接种于无利福平的结核分枝杆菌快速液体培养基内返祖培养。将含利福平和无利福平的培养物及返祖菌进行细胞壁染色和透射电镜观察其细胞壁完整性，扫描电镜观察其表面微观结构。含利福平的培养物转种L型菌琼脂平板培养，无利福平的培养物和返祖菌转种营养琼脂平板培养，观察其菌落形态。对诱导前接种菌和返祖菌的16S rDNA进行鉴定。 结果 在含256 μg/mL利福平浓度的结核分枝杆菌快速液体培养基中培养的脓肿分枝杆菌的细胞壁缺失，形态为球形，L型细菌琼脂平板上菌落呈典型油煎蛋样，而无利福平的结核分枝杆菌快速液体培养基中培养的脓肿分枝杆菌细胞壁完整，形态为杆状，营养琼脂平板上呈圆形菌落。256 μg/mL利福平浓度的结核分枝杆菌快速液体培养基中培养的脓肿分枝杆菌经返祖后，返祖菌细胞壁完整，形态为杆状，营养琼脂平板上菌落也呈圆形。16S rDNA鉴定返祖菌与诱导前接种菌的同源性达100%，为同一种细菌，即脓肿分枝杆菌。 结论 利福平成功诱导脓肿分枝杆菌L型。

Abstract: Objective To determine the induction of rifampicin to L-forms of *Mycobacterium abscessi*. Methods *Mycobacterium abscessi* were cultured in liquid culture media for culturing *Mycobacterium tuberculosis* rapidly with 256 μg/mL rifampicin to induce their L-forms or without rifampicin, respectively. The

cultures of the above culture media were filtrated with 0.45 μm filte membrane. The filtrate was subcultured in the nutrient agar media for reversion. Their cultures of the culture media with 256 μg/mL rifampicin or without rifampicin, and the reversional bacteria were observed for integrity of their cell walls after cell wall staining by transmission electron microscopy, and the microstructures of their surfaces by scanning electronic microscopy. The cultures of the culture media with 256 μg/mL rifampicin were subcultured in L-form agar media, while those of the liquid culture media without rifampicin and the reversional bacteria were subcultured in the nutrient agar media in order to observe the colonial morphology. The reversional bacteria were identified for its semblances with the initial *Mycobacterium abscessi* by 16S rDNA. Results After cell wall staining, transmission electron microscopy displayed the cultures of liquid culture media for culturing *Mycobacterium tuberculosis* rapidly with 256 μg/mL rifampicin showed deficient cell walls. Scanning electronic microscopy observed the cultures were in globular shapes, and those in L-form agar media displayed typical fried eggs like colonies. While those of liquid culture media for culturing *Mycobacterium tuberculosis* rapidly without rifampicin showed complete cell walls, rod shapes and round colonial morphologies in nutrient agar media. The reversional bacteria were also in complete cell walls, rod shapes and round colonial morphologies in nutrient agar media. 16S rDNA of the bacteria indicated that the semblances of the reversional bacteria and the initial bacteria were 100%, and identified they were the same kind of *Mycobacterium abscessi*. Conclusion Rifampicin can successfully induce the L-forms of *Mycobacterium abscessi*.

参考文献/REFERENCES:

范贵荣, 杨致邦, 黄进. 利福平对脓肿分枝杆菌L型的诱导作用[J].第三军医大学学报,2013,35(16):1717-1720.