

Brief report

Genetic survey of Propionibacterium for the establishment of the diagnosis of sarcoidosis in our seven cases with formalin-fixed paraffin-embedded specimens

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Background : Sarcoidosis is widely regarded as the result from bacterial infection of normal bacterial flora by Propionibacterium acnes or P. granulosum with the promotion of Th1-immunological granulomatous reaction (1) (2). Results : In our 7 sarcoidosis cases P. acnes was confirmed in 6 cases. No P. granulosum was found. Conclusion : The confirmation of Propionibacterium was very useful to diagnose sarcoidosis genetically.

Key words : sarcoidosis, genetic diagnosis, Propionibacterium acnes, Propionibacterium granulosum, polymerase chain reaction (PCR), formalin-fixed paraffin-embedded specimens (FFPE)

Our 7 sarcoidosis were consisted of 3 cutaneous lesions and 4 pulmonary ones. Each DNA samples were extracted from their FFPE specimens in our previous method (3). PCR was done with both pairs of primers as followings : P. acnes (PA) : 131 bp of 16S rRNA, PA-F (Forward) : 5'-gctgAgtgAcggtAatgggtA-3', PA-R (Reverse) : 5'-ttccgAcgcgAtcAaccA-3', and P. granulosum (PG) : 102 bp of 16S rRNA, PG-F : 5'-AcAtggAtccgggAgcttc-3', PG-R : 5'-AcccAAcAtctcAcgAcg-3'. PCR amplification was 95°C x 20', 40 cycles (95°C x 1', 54°C x 1' for P. acnes, 58°C x 1' for P. granulosum, 72°C x 2'), and 72°C x 10'. P. acnes was shown in 6 out of 7 cases and no P. granulosum was found. This genetic approach was very significant in the present conditions that the pathologic confirmation could not be definite to diagnose sarcoidosis.

References

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和文抄録

短報

ホルマリン固定パラフィン包埋標本による7例のサルコイドーシスの診断確立のためのプロピオニバクテリウム菌属の遺伝学的検査

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背景：サルコイドーシスは、プロピオニバクテリウム・アクネ菌とプロピオニバクテリウム・グラヌローサム菌による正常細菌叢の細菌感染症に由来する過剰な Th1 免疫学的肉芽腫性反応に起因すると考えられている。

結果：我々の7例のサルコイドーシス症例において、6例にプロピオニバクテリウム・アクネ菌が確認された。プロピオニバクテリウム・グラヌローサム菌は同定できなかった。

結論：プロピオニバクテリウム菌属の遺伝学的検出は、サルコイドーシスを診断する為に非常に役立った。

キーワード：サルコイドーシス、遺伝子検査、プロピオニバクテリウム・アクネ菌、プロピオニバクテリウム・グラヌローサム菌、ポリメラーゼ連鎖反応

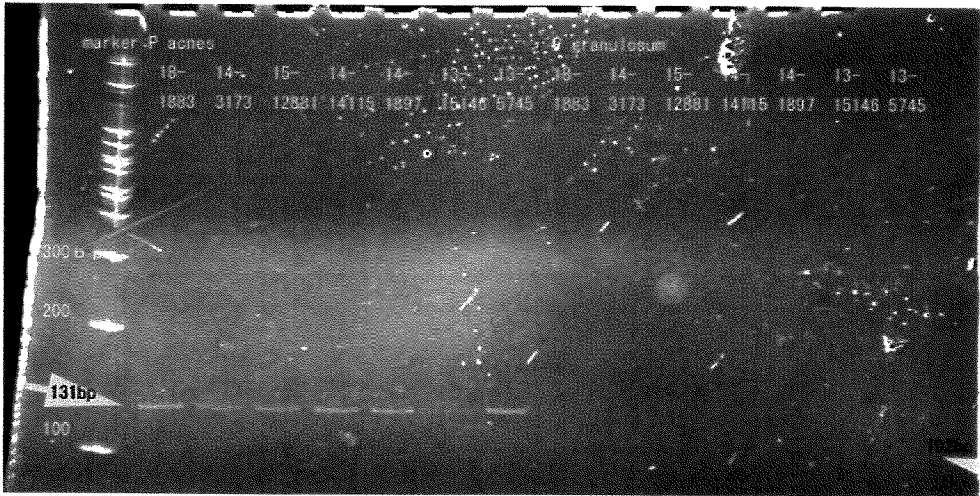


Fig. Polymerase chain reaction for *Propionibacterium acnes*, *Propionibacterium granulosum*. Positive band was 131 bp for *P. acnes* (left side) and 102 bp for *P. granulosum* (right side). Positivity was shown in 6 cases in *P. acnes*.