

Dear Editor and Reviewers,

Thank you very much for your valuable comments and suggestions on our manuscript (NO: 91175) . Following the reviewers' comments, we have modified and improved our manuscript according to your kind advices and referee's detailed suggestions. We have revised the manuscript in response to all the issues raised in the peer-reviewed report and have highlighted the changes/additions in yellow in the revised manuscript. These are listed about the specific additions/modifications below for convenience

1. The first issue: Post-treatment imaging data were lacking for comparison.)

Answer : The patient's symptoms resolved after treatment, and she went through pregnancy, delivery, and breastfeeding over the next two years. After stopping breastfeeding, the patient returned to the clinic in June, 2023, and did not complain of significant back pain and oblique rib pain again. MRI of the thoracic vertebra indicated that the original lesion site was significantly improved. See Figure 4.

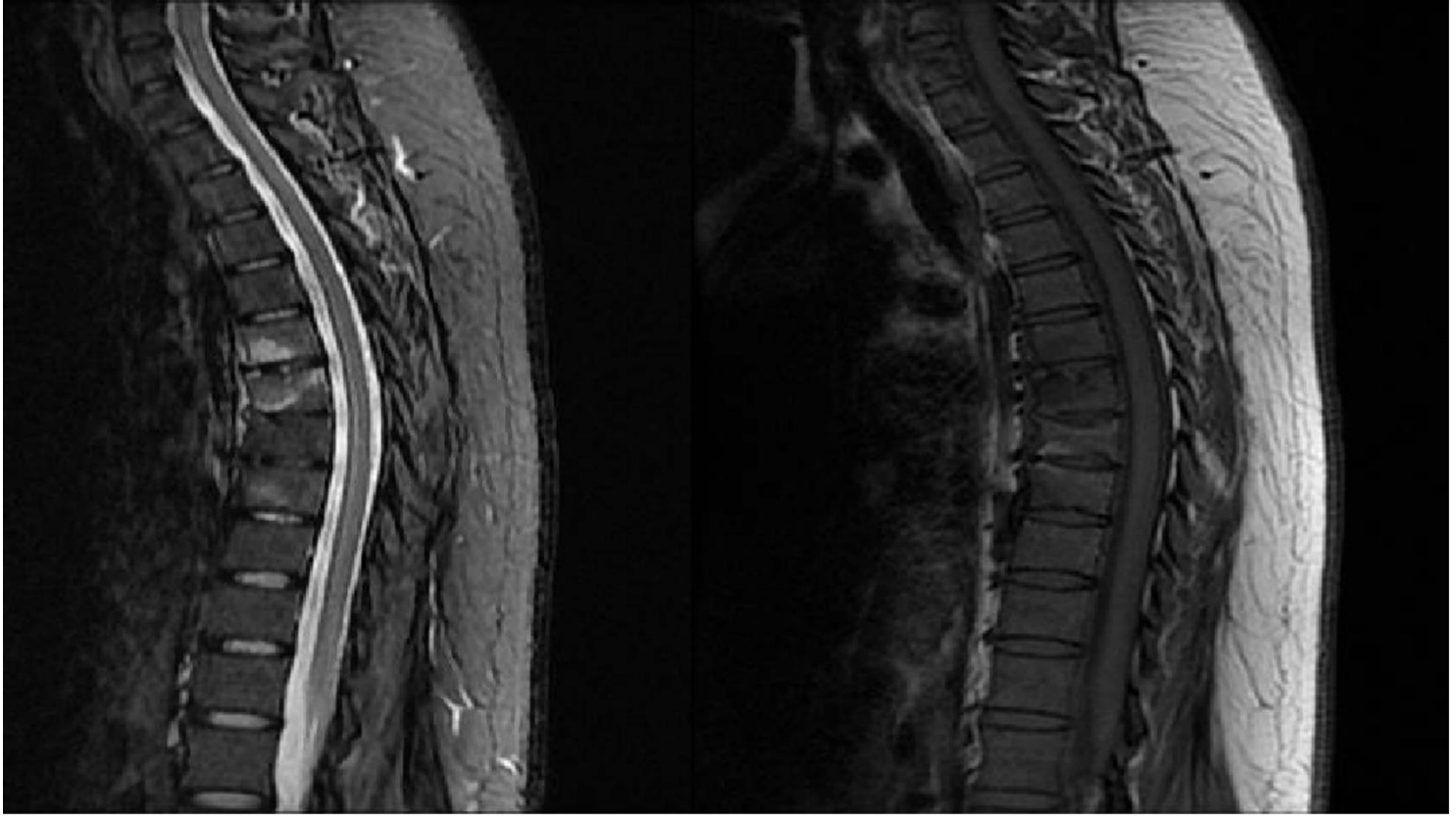


Fig.4 the thoracic vertebrae 7-9 after treatment by MRI

2.The second issue: Is moxifloxacin the most sensitive drug to treat *Pseudomonas fluorescens*? What other medications are available? Which antibiotics are they not sensitive to?

Answer: The Department of Pharmacology, Shantou University Medical School in China has carried out a drug resistance study on a strain of *Pseudomonas fluorescens*, and found that the strain was resistant to penicillin, ampicillin, amoxicillin, cefuroxime, ceftazidime, cefotaxime, cefazolin, imipenem, meropenem, amronam and tetracycline, and only sensitive to ciprofloxacin 【Yao Fen, Huang Yuanchun, Zhang Juan, et al. Drug resistance of a strain of *Pseudomonas fluorescens*. Journal of

Shantou University Medical College.2008,21(4): 205-207,211】.Liu Yuxiang 【Liu Yuxiang. A case of secondary infection of pseudomonas fluorescens after finger skin trauma. Journal of Clinical and Experimental Medicine. 2012,11 (18): 3】 carried out drug sensitivity test on the patients infected with Pseudomonas fluorescein secondary to finger skin trauma, and found that the bacteria was sensitive to ceftazidime, amikacin, amronam, levofloxacin, ciprofloxacin, imipenem, meropenem, tobramycin, netimicin, etc. It was resistant to piperacillin, cefoperazone, polymyxin B and ticacillin.so we empirically selected ciprofloxacin in the absence of drug sensitivity and achieved good therapeutic effect.

3.The third issue:Why are cultures and biochemical tests difficult to detect Pseudomonas fluorescens?

Answer:There were three reasons for this patient's failure to culture positive bacteria in the bacterial culture. First, few lesion samples were obtained by puncture and the transfection rate was too low. Second, there was no fluorescence test.Third, culture is less sensitive than gene sequencing. The culture requirement is that only live bacteria can culture positive bacteria growth, and in the progressive or active stage of the disease, the lesion site has obvious inflammatory infiltration and cytophagocytosis, inanimate bacteria or decomposed nucleic acid fragments can not culture positive results, and can not be biochemical

identification. For gene sequencing, its sensitivity is higher, both live bacteria and decomposed nucleic acid fragments can be detected, so culture and biochemical tests failed to detect *Pseudomonas fluorescens*, while gene sequencing can well detect this pathogen.

4. The fourth issue: The treatment is effective only for symptom relief, is there sequencing again?

Answer: The patient's symptoms resolved after treatment, and she went through pregnancy, delivery, and breastfeeding over the next two years, so no second-generation sequencing was performed.

5. The fifth issue: Unify font sizes in figure legend.

Answer: We will pay more attention to every detail, and the font part in the figure has been completely corrected.

6. The sixth issue: There is more than one species of *Pseudomonas fluorescens* in the sequencing results, is there the possibility of co-infection?

There were *Pseudomonas fluorescens*, *Escherichia coli* and *Staphylococcus* in the sequencing results, and there may be co-infection.

7. The seventh issue: What is the incidence and the epidemiological characteristics of *Pseudomonas fluorescens*?

Answer: *Pseudomonas fluorescein* is an opportunistic pathogen, and the most common clinical infection is through blood and blood products

【Pittman M. A study of bacteria in replicate dintransfusion reactions and

of bacteria isolated from blood products [J] . Journal of Laboratory and Clinical Medicine,1953,42:273.Abraham I.B.,Carey F.J.,Siemienski J.. Studies of bacterial transfusion reactions from refrigerated blood, the properties of growing bacteria [J] .Journal of Clinical Investigation,1955,34:311 .Pang Xueran, Zhang Zhiqiang, Zhang Qinhui, et al. Identification of Gram's negative bacilli in cold storage blood stain [J]. Chinese Journal of Blood Transfusion,1988,1 (1) : 28】 .Between 2004 and 2006, 80 people in the United States were reported to have been infected by products contaminated with the *Pseudomonas fluorescens* 【Gershman M.D.,Kennedy D.J.,Noble-Wang J.,etc. Multistate outbreak of *Pseudomonas fluorescens* bloodstream infection after exposure to contaminated heparinized saline flush prepared by a compounding pharmacy [J] .Clinical Infectious Diseases,2008,47(11):1372-1379】 .The bacteria can exist in urine, bile juice, skin and skin infected secretions[[Li Zhongxing, Zheng Jiaqi and Li Jiahong, eds. Diagnostic bacteriology. 1st edition [M]. Beijing: People's Medical Publication,1986:235-249.[21] J a v i t s. Deng Zl, et al. Trans. Medical Microbiology. The 1st edition [M]. Beijing: People's Medical Publishing House, 1983:329-342.]], and can also enter the blood, causing various pyogenic pus, osteomyelitis, pyogenic ganglitis and lung infection. Even lead to septicemia, infected huke and blood tube coagulation and other severe aftereffects, disease death rate is very high 【Jiang Jia. Beware of pathogenic bacteria hiding in

the refrigerator [N]. Wen Hui Po, 2003-12-08】. *Pseudomonas fluorescens* is temperature-sensitive and does not grow under 37°C or 42°C during bacterial culture 【Liu Yuxiang. A case of secondary infection of *pseudomonas fluorescens* after finger skin trauma. *Journal of Clinical and Experimental Medicine*. 2012,11 (18): 3】. However, it is possible to develop transient strains that are tolerant to high temperature, so that the application of *Pseudomonas psychrophila*, which is widely distributed in the natural realm, to human and animal disease will be enhanced. Many of the antibiotics available are not sensitive enough to *Pseudomonas fluorescences*, so try to choose sensitive antibiotics according to the drug sensitivity test.