

## INTRODUCTION

Scarlet fever is a contagious disease caused by Group A Streptococcus. It mostly affects children 5 to 15 years old.<sup>1</sup> The disease is characterized by a scarlatiniform rash and usually occurs with Group A Streptococcal pharyngitis, although it can also follow group A Streptococcal pyoderma or wound infections.<sup>1</sup> Scarlet fever can be effectively treated with antibiotics, but it does sometimes cause complications such as otitis media, throat abscess, cervical lymphadenitis, chest infection, meningitis, liver problems, glomerulonephritis, acute rheumatic fever and rarely toxic shock syndrome.<sup>1,2</sup> There is no vaccine available against scarlet fever. Although the disease is less prevalent now than in the old days, we do encounter outbreaks at times. This poster reports the difference in the clinical presentations of two scarlet fever patients seen in Hong Kong by the author.

## AIM

To alert GP colleagues on the features of scarlet fever and beware of this potentially complicated disease.

## METHOD

The clinical presentations of two scarlet fever patients seen by the author in Hong Kong were reported as follows:

**Case 1:** A 5 years old boy presented on 11 November 2016 with a 1-day history of fever to 38.5 degrees with sore throat and non-specific abdominal pain. Physical examination showed a congested throat but without any exudates nor vesicles. (Fig. 1)



Fig.1

Abdominal examination was unremarkable. The next day morning (~36 hours after the onset of fever), his temperature went down to 37.3 degrees but he developed fine diffuse pink rash over his neck and upper trunk with a 'sandpaper' texture. Scarlet fever was suspected and subsequently confirmed by a positive throat swab of Streptococcus pyogenes. His fever totally subsided within 12 hours after antibiotic commencement and the rash disappeared totally 1 week later.



Fig. 2 (On 24 Feb 2017)

**Case 2:** A 7 years old girl presented on 21 February 2017 morning with fever up to 38.8 degrees with sore throat. Physical examination showed a congested throat but without any exudates nor vesicles. Her fever subsided the next day and her sore throat was better. On 23 February morning, she developed minimal faint rash over her upper trunk. She re-kicked up a low-grade fever to 37.8 degree in the afternoon. The rash spread over the whole body with a suntan appearance in the subsequent 12 hours. (Fig. 2)

She also showed the distinctive "strawberry tongue". (Fig. 3)



Fig. 3

Scarlet fever was suspected and subsequently confirmed by a positive throat swab of Streptococcus pyogenes. Her fever totally subsided 6 hours after antibiotic commencement.

In the following days, the skin rash gradually desquamated and had a scaling appearance. (Fig. 4 and 5)

The skin totally normalized by 2 weeks.

Interesting to note, the Case 2 girl had a recurrence of scarlet fever on 29 Aug 2018. In this episode, she kicked up fever on 27 Aug 2018 evening and the fever subsided 1 day afterwards. However, she developed generalized erythematous rash on 29 Aug 2018 especially over the trunk. (Fig. 6 & 7)

The classic "strawberry tongue" (Fig. 8) was seen again.

This time, the skin changes was not as drastic as the previous episode. She recovered much quickly within a few days.



Above : Fig. 4 (On 25 Feb 2017)  
Below : Fig. 5 (On 28 Feb 2017)



Above : Fig. 6  
Below : Fig. 7

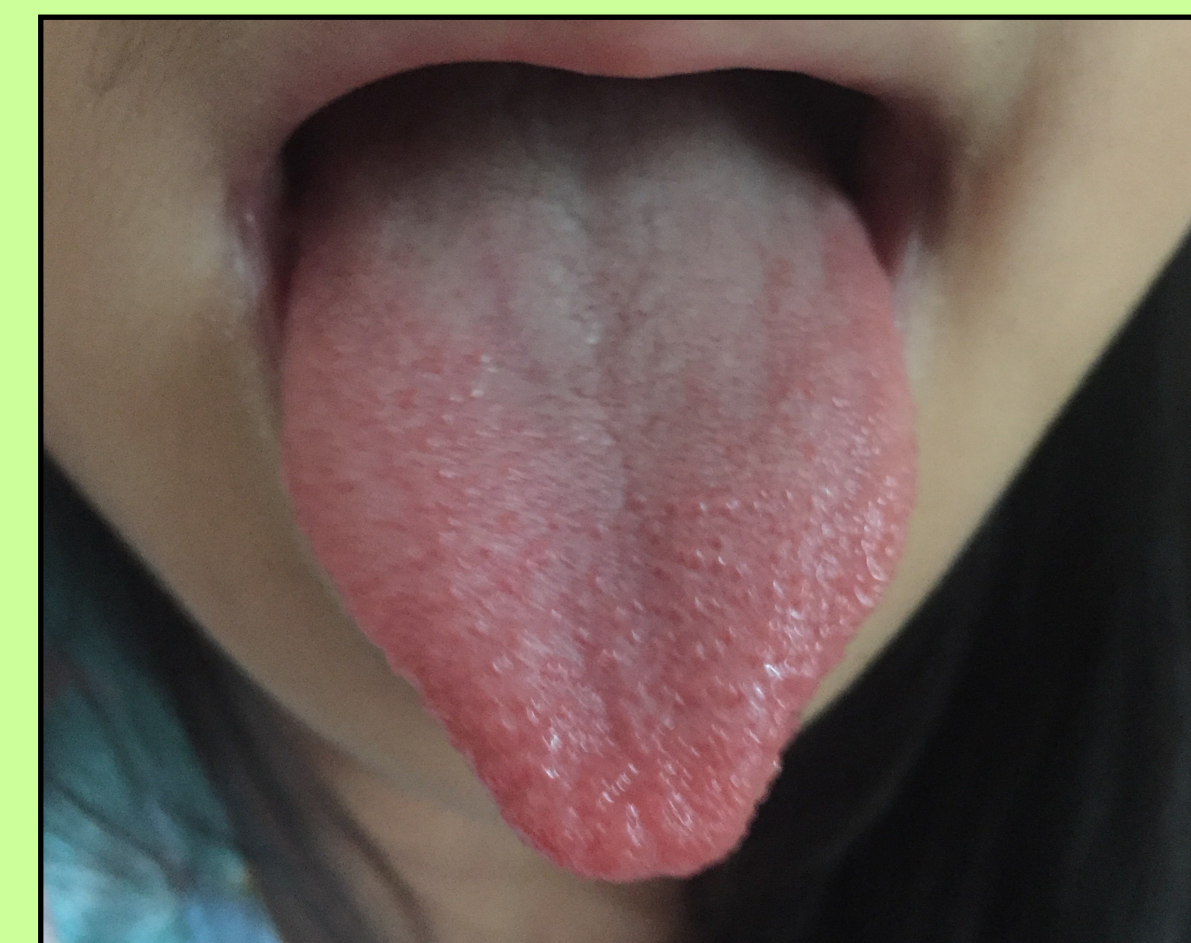


Fig. 8

## RESULT

In the cases illustrated above, all of them were cured with a 10 days' course of oral penicillin without long-term sequelae. Although all were confirmed scarlet fever cases, but the presentations, especially the rash onset time, morphology and clinical course were not exactly the same.

## DISCUSSION

Patients with scarlet fever may not present with all the typical features of the disease initially, as in the first boy. Eg. There was no "strawberry tongue", flushed face with perioral pallor. Yet, a high index of suspicion was the key to diagnosis. Scarlet fever is a notifiable disease in Hong Kong. There were totally 2353 cases reported in Hong Kong in 2017.<sup>3</sup> In the first half of 2018, there were already 1224 cases reported.<sup>3</sup> If left untreated, scarlet fever may lead to complications as mentioned in the introduction. Inadequate treatment to Streptococcus pyogenes infection is an important cause of acute rheumatic fever and rheumatic heart disease, and is still worthwhile to be noted around the world.<sup>4</sup>

## CONCLUSION

Prompt diagnosis with high index of suspicion and ensuring patient's drug compliance are of utmost importance in the management of scarlet fever as to effectively reduce complications development.

### References:

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