

A Case of Generalized Papular Pityriasis Rosea in Children

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Abstract: Pityriasis rosea is a common seen clinical inflammatory skin disease, which usually occurs in the trunk and extremities with certain number of colored rose-colored stain. Its surface is covered with chaff scales. This disease mostly occurs in young or middle-aged people, and some patients have pruritus, which seriously affects the quality of life of patients. Generalized papular pityriasis rosea is a serious disease cause by pityriasis rosea with symptoms in the limbs and trunk. It may increase inflammatory damage of the skin as the condition deteriorates. Pigmentation in the remaining lesions is caused and early treatment should be applied in early stage. The morbid state, clinical manifestation, laboratory examination, histopathology examination and treatment condition of a 12-year-old child with generalized papular Pityriasis rosea is reported. After 3 weeks of treatment, deflorescence is seen of the patient, with only remaining light brown pigmentation and pruritus disappeared, which is shown as follows.

1. Clinical Data

The patient is a male with the age of 12 years old. The main cause was scaly papules on the face, neck, trunk and limbs for 10 days. He came to our hospital in September 2018. Ten days before he came to the hospital, large flat papules in the abdomen of the little finger, with thin white scales covering the surface and mild pruritus. After 4 days later, red papule were found on the chest and back without diagnosis and treatment and the rash gradually spread to the neck, face and limbs. Then he went to the hospital for treatment. Medical examination had made it clear that he was physically healthy before and there was on relative disease that this in his family After the symptoms were found and on month before, he did not take drugs for external use and for oral administration. Physical examination: obvious pharyngeal congestion, lymphatic follicular hyperplasia, tonsil enlargement, a little congestion. Examination in dermatology department: there was a dark red oval maculopapule of 1.5 cm on the right chest and the color in the central part is light with thin white scales in surrounded, facial (Figure 1), the neck (Figure 2), the chest (Figure 3), back (Figure 4), the distribution in the limbs grain size red papules, its overlying thin chaff sample scales, scrape the scales not seen film phenomenon and dotted hemorrhage, skin rash long axis and leather in the same direction, the back skin rashes are arranged Christmas tree samples, palmoplantar department did not see a rash. Laboratory examination: blood routine was normal; serum test of syphilis was negative. Histopathological examination of the skin lesions showed hyperkeratosis of the epidermis, focal hypokeratosis, slight hypertrophy of the spinous layer,

intracellular and intercellular edema, and telangiectasia in the upper dermis, and infiltration of peripheral lymphocytes, as shown in Figure 5.



Figure 1. Facial lesions of patients with generalized papular Pityriasis rosea



Figure 2. Cervical lesions in patients with generalized papular Pityriasis rotunda



Figure 3. Thoracic and abdominal lesions in patients with generalized papular Pityriasis rosea



Figure 4. Back lesions in patients with generalized papular Pityriasis rosea

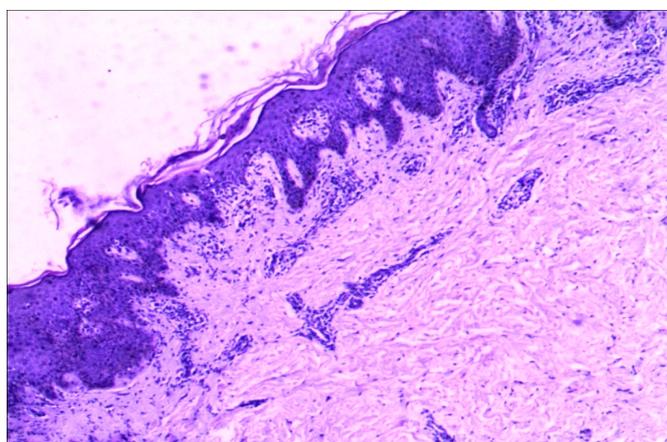


Figure 5. Skin histopathology in patients with generalized papular Pityriasis rosea (HE staining ×40)

Clinical diagnosis: generalized papular pityriasis rosin.

Treatment: Compound Puqin Tablets (2 times /d), compound glycyrrhizic anhydric capsule (25mg), fluticasone propionate cream (1g) (3 times /d), and the affected area (3 times /d) were taken orally. After 3 weeks, the rash subsided, with remaining pale brown pigmentation and no itching.

2. Discussion

The etiology of pityriasis rosin is unknown, and the disease is related to pityriasis rosin virus, which is caused by the human herpes viruses 6A, 6B and 7 (HHV6A, HHV6B, HHV7) and HHV6B、HHV7 were diagnosed in early childhood, so the antibody positive rate of the above two viruses is relatively high in adults. When human body is infected with HHV6B and HHV7, the virus usually presents latent state. When human body was abnormal in immune function, the virus will be activated and relevant infectious symptoms will be induced, including parascarlata, epilepsy, fever, pityriasis rosea and other diseases [1-2]. The disease was frequently seen among young and middle age people, which is seen as the high-risk groups and occurred mostly in spring and autumn. The initial damage is diagnosed with 1 ~ 3 cm of rose erythema in diameter with thin scales on the surface, called prodromal spot, and there were 1~ 3 prodromal spots. Although the course of the disease cycle extended, it can, in 1 ~ 2 weeks, spread to the arms and legs, torso, which are symmetrically distributed. Besides, 0.2 ~ 1 cm of oval erythema in diameter was diagnosed with thin scales on surface. At the edge of the focus, there were weak lesions with pruritus to different degrees. The rash usually occurs below the neck and above the knee, and is mostly scaly macula. The skin lesion is consistent with the direction of the skin striae, without itching or mild itching. The histopathology is non-specific inflammation. About 20% of patients with pityriasis rosea were diagnosed with atypical lesions [3].

In this case, the rash is of the papular type with symptoms seen in all the body and on the face, which is rare in clinical practice. There are few reports on pityriasis rosin in domestic literature. This disease should be distinguished from psoriasis, seborrheic dermatitis, pityriasis rosea shaped drug rash and syphilis, etc. Children with psoriasis were more likely to develop psoriasis with upper respiratory tract infection. The skin rash was scaly papules or plaques with a thick layer of silvery white scales on the surface. The film showed obvious punctiform hemorrhage. Seborrheic dermatitis can be manifested as pityriasis rosettes, but no mother spot, the rash mainly occurs in the scalp, eyebrow, trunk line and other sebum overflow parts. Commonly known as the imitation master, syphilis may present any skin disease similar to a rash, but most involve the metatarsal part, histopathological findings of plasma cell infiltration, positive syphilis serum test can be confirmed, so it can be used in the differential diagnosis of pityriasis rosin.

In treatment of pityriasis rosea, the main treatments include general, antihistamines, drug therapy of traditional Chinese medicine, ultraviolet radiation, external use medicine, etc. As the high requirements on treatment site and equipment and long period of treatment, treatment compliance of patients was relatively low, so the main treatment the disease is still based on drug therapy [4]. In the treatment of this disease, the patient has generalized papular pityriasis rosin, the lesion scope is relatively large and the disease is relatively serious, how to implement treatment to control the development of the disease is particularly critical. In this treatment, the patient was treated with compound Puqin Tablet, compound glycyrrhizin capsule and fluticasone propionate cream, and the rash subsided after 3 weeks of treatment, confirming the therapeutic effectiveness.

According to Traditional Chinese medicine, pityriasis rose belongs to wind-heat ulcers. It is believed that the occurrence of pityriasis rois is related to emotional depression, overeating, acrimony, and fire, resulting in heat accumulation in the blood, dampness and wind generation, and reinduction of wind-heat exogenous factors, resulting in wind-heat stagnation and depression-closed skin, thus requiring heat-clearing and wind-dispelling treatment to relieve itching [5-6]. Compound PuQin piece is a proprietary Chinese medicine in the treatment, the main components of the dandelion, three needle extracts from scutellaria baicalensis georgi extract and north bean root extract. The dandelion has broad-spectrum antibacterial function, which has the inhibiting effect for

the fungus, gram-positive bacteria and gram-negative bacteria, and other disease pathogenic microorganisms, at the same time can enhance the defensive reaction of living tissue of vascular system to the outside damage factor, and anti-inflammatory effect is ideal. Baicalin in *Scutellaria baicalensis* has anti-inflammatory and anti-swelling effects [7]. Berberine has antibacterial, anti-arrhythmia, anti-inflammatory effects.

Beidou Rhizome has the effect of expectorant, antipyretic and anti-inflammatory, and the whole medicine has the effect of clearing away heat and detoxifying, antibacterial and anti-inflammatory. It has been used in the treatment of acute and chronic upper respiratory tract infection and oral acute and chronic inflammation, which can relieve various clinical manifestations caused by inflammatory reaction. However, generalized pityriasis rosea is an inflammatory response of the skin, and most of them have abnormal expression of inflammatory factors. Therefore, antibacterial and anti-inflammatory treatments are needed to relieve itching, redness and other symptoms caused by the inflammatory response[8]. Compound glycyrrhizin tablets are therapeutic drugs for skin diseases such as dermatitis and eczema, in which glycyrrhizin can bind to the lipoxygenase produced by arachidonic acid to selectively block the phosphorylation of the enzyme to inhibit the inflammatory response[9]. It can also improve the reaction of local allergic necrosis. On this basis, T cell activation can be regulated to regulate the immune function of patients and enhance the effect of rash clearance [10-11]. Fluticasone propionate is A glucocorticoid drug, which has strong anti-allergic and anti-inflammatory effects. In topical treatment, inhibition of phospholipase A can affect the synthesis ability of leukotriene and prostaglandin, so as to exert anti-inflammatory effects [12]. In this study, the patient was treated with a combination of the above three drugs, and the results showed that the patient's rash subsided gradually after 3 weeks of treatment, confirming the effectiveness of this treatment method.

At the same time, we should strengthen nursing intervention. Due to the symptoms of fever, loss of appetite, joint pain and other symptoms, accompanied by oral damage, the patient experienced obvious discomfort. In order to avoid further increasing the skin damage of the patient, hot water bath should be avoided when taking a bath, and rubbing towel should not be applied. Soap and body wash should not be used, so as to reduce the irritation of the lesion. Daily needs to strengthen the need and exercise, in order to enhance the patient's physique, improve their immune ability, accelerate the ability of their own inflammation clearance; Avoid contact with pungent food and high-energy food, increase the intake of vegetables and fruits, and increase the food rich in vitamin C, vitamin E and vitamin A, so as to improve the membrane permeability and alleviate clinical symptoms. Meanwhile, increase the intake of coarse food, so as to enhance the intestinal immunity of patients and enhance the therapeutic effect; Maintain a positive and optimistic attitude to avoid tension and anxiety aggravating the disease.

In conclusion, extensive papular pityriasis rosea is rarely seen in clinical practice, which seriously influence patient's appearance and quality of life. Therefore, in clinical diagnosis, the clinical manifestation, pathological tissue should be comprehensively taken into consideration for diagnosis. During treatment, traditional Chinese and western medicine should be applied and the daily health guidance should be strengthened to ensure the treatment effect and reduce patient injury.

References

- [1] Yu Rui-yao. Color map of childhood skin diseases. The 1st edition. Zhengzhou: Henan Science and Technology Press, 2019:231.
- [2] Zhao Bian. Clinical dermatology in China. The 2nd edition. Zhengzhou: Jiangsu Phoenix Science and Technology Press, 2017:1132-1135.
- [3] Wang Lili, Yang Bin. Research progress on the correlation between rosette virus and pityriasis rosette. Chinese Journal of Leprosy Dermatology, 2018, 34(10):60-62+66.
- [4] Liu Dong-dong, Fan Tuan-qi, LI Wei-hong, et al. Expression and correlation of serum IL-17 and IL-35 in patients with Pityriasis rosin. Henan Journal of Preventive Medicine, 2018, 29(05):334-335.

- [5] Chu Na, Wen Xiaomei. Therapeutic effect of Xiaoexan combined with ULTRAVIOLET light therapy and levotirizine hydrochloride on Pityriasis robed. *Sichuan Traditional Chinese Medicine*, 2018, 36(10):156-159.
- [6] Chen J H, He X Y, WANG X, et al. Clinical study of integrated Chinese and Western medicine in the treatment of wind-heat drying pityriasis rosea . *Massage and rehabilitation medicine*, 2019,37(16):34-36.
- [7] Wang Y Q, Bai M J, Wu Y N, et al. Progress in the diagnosis and treatment of Pityriasis rosis with integrated Traditional Chinese and Western medicine. *Shandong journal of traditional Chinese medicine*, 2019,38(04):384-389.
- [8] Yan Yan, QIN Bin, Yin Guo. Simultaneous determination of 4 active components in Compound Puqin Capsule by HPLC. *Taiwan Pharmacology*, 2008,33(7):80-82.
- [9] Zhang N, Liang Z B, LI S, et al. Efficacy of Shufeng Jiedu capsules combined with compound glycyrrhizin tablets in the treatment of Pityriasis rosae . *Chinese Medical Emergencies*, 2019, 028(010):1832-1833.
- [10] Zhong Xin-Gang. Observation on the efficacy of Loratadine Granule combined with compound glycyrrhizin capsule in the treatment of Pityriasis robed . *Shanxi Journal of Medicine*, 2018, 47(15):1810-1812.
- [11] Kang Xiang-yi, YAO Li-ping, Yang Chun-yan. Effect of Ice cypress liquid fumigation combined with compound glycyrrhizin and narrow-spectrum UV-WAVE irradiation in the treatment of Pityriasis rosea . *Journal of Contemporary Medicine*, 2018, 16(04):117-118.
- [12] Li Wei. Comparison of effects of fluticasone propionate, Budesonide and Beclomethasone propionate inhalers on children with cough variant asthma . *China Pharmacoeconomics*, 2019, 14(03):75-78.