

Kampo Dermatology – Clinical Studies

Solar Irritating Dermatitis/Sunburn (7)

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Ultraviolet radiation is made up of different wavelengths which are classified into UVA (long wavelength), UVB (middle wavelength), and UVC (short wavelength). The radiation levels of UVA are at their highest from May through to the end of August, whereas UVB levels are at their highest from July to the end of August. Solar irritating dermatitis frequently happens from April to October.

UVA plays a role in carcinogenesis, penetrates into the skin, causes wrinkles and slack, and accelerates skin ageing. UVB rays are absorbed by the surface layers of the skin, causing skin inflammation. The skin surface becomes red which then turns to black. If this is repeated over and over again, the production of keratin increases accompanying the increased production of melanin, which is the source of spots and freckles.

The skin exposed to direct rays of the sun for hours becomes like being burned, which is referred to as sunburn. The skin complexions of people are various, some have fair skin by nature, some have dark skin, and some have medium complexions. The sensitivity and response to the sunlight differ among people. Just walking in the sunshine causes inflammation in the exposed region of the skin – this condition is specifically called as solar irritating dermatitis.

In a skin inflammation induced by ultraviolet radiation, symptoms are generally swollen red face with blisters. Repeated exposures to ultraviolet radiation often result in chronic disorders. Ultraviolet radiation causes damages to such as epidermal cells, pigment cells, the

circulatory system in the dermis, and connective tissues, leading to wrinkles, spots/blemishes, and keratoma.

To reduce inflammation, *maobushisaishinto* is used. If coldness exists, this formula is more effective because aconite daughter tuber and Asiasarum root work on the kidney together with the action of keeping the kidney warm. By warming the kidney, the legs and feet also get warmed, which improves the predisposition so that the skin does not get burned easily.

And, in the extremely hot season, systemic flushes and dryness become intense. Sometimes hyperthermia-like symptoms appear. A skin inflammation that exhibits hyperthermia-like symptoms is called solar dermatitis. Erythroderma developed as a result of solar dermatitis needs prescriptions that have heat-clearing and diuretic actions. For this, *byakkokaninjinto*, *shofusan*, and *eppikajutsuto* are used. If enriching yin and clearing heat are expected, *shishihakuhito* is used. This formula is good for red spots (erythema) around the eyes and conjunctival injection.

Once these inflammations have developed, mostly kidney yang becomes deficient and legs become cold. So sun care and a warming type of prescriptions are required. It is needless to add that Kampo medicines for oral administration differ depending on the condition.

In any event, avoiding ultraviolet rays is important. Beach sunbathing and artificial tanning are out of the question. Even with a hat on for protection, there are negative influences from the reflection of ultraviolet radiation, so caution is necessary. In other periods than May-August, needless to say, care needs to be taken for winter snow-surfaces. Light reflections from water surfaces, sand hills, and asphalt have

also adverse affects, which needs to be taken into account. Even on a cloudy day, up to 80 percent of the sun's ultraviolet rays can pass through the clouds and reach the earth.

Since UVA has the action of carcinogenesis as mentioned above, protecting ultraviolet rays is connected to preventing cancer. Especially in women, the use of cosmetics, for example, with light blocking effects will help prevent skin damages and diseases or stop inflammation from becoming exacerbated.

Case 1: Solar irritating dermatitis

64 year- old, female

History of present illness: More than 40 years ago (around at the age of 20) solar irritating dermatitis developed and every year it occurred. This year, it was in May (two months ago).

Present condition: There were swellings and red pots (solar irritating dermatitis) from the face to the hands. Hives, drug eruptions, and thyroid hypofunction developed. Legs were cold. The patient was using many internal anti-allergic and antihistaminic agents and external betamethasone and other two agents that were prescribed by her previous physician.



Before treatment



After 1 week



After 2 weeks

UV test up to 10 seconds (—)

Abdominal condition: Tenderness in para-umbilican regions on both sides

Tongue condition: Tongue body - purple-red colored

with white furs

Treatment and course

Initial visit. *shishihakuhito* 4.0g and *epikajutsuto* 5.0g were administered for 7 days.

Together with these medicines, *maobushisaishinto* was also prescribed. The patient received the instructions that it be taken 30 minutes before going out and need not be taken on rainy days.

Re-visit: The face was mostly treated. Constipation. Sweating around the jaw.

Daiobotampito 5.0g and *sammotsuogonto* 5.0g were administered for 14 days.

Maobushisaishinto 5.0g was also prescribed as in the initial visit.

Four diagnoses. *daiobotampito* 5.0g and *sammotsuogonto* 5.0g were administered for 14 days.

Maobushisaishinto 5.0g was also prescribed. Cure was attained.

Case 2: Solar irritating dermatitis + atopic dermatitis

25-year old, female

Present condition: Solar irritating dermatitis and atopic dermatitis became aggravated six months ago. The conditions became further aggravated by the steroids administered by a previous physician.

UV test up to 30 seconds (-)

After this, *maobushisaishinto* alone was used. Good conditions were maintained.

Treatment and course

Sammotsuogonto 5.0g and *maobushisaishinto* 5.0g were administered for 7 days.



Shishihakuhito 5.0g and *maobushisaishinto* 5.0g were also administered for 7 days.

The condition of solar dermatitis improved. However, red spots on the face, forehead, and upper body appeared due to sweat.

eppikajutsuto 5.0g and *maobushisaishinto* 5.0g were administered for 7 days. The overall condition including atopic dermatitis became good.

Case 25: Solar dermatitis + Erythroderma

Female of 53 years old

Current medical history: Erythroderma. Allergic dermatitis was transferred to solar dermatitis, which then progressed to erythroderma. Facial erythroderma developed three years ago and gradually expanded to the present condition.

She had various examinations at the Department of Dermatology of a certain University Hospital

with the findings of no abnormalities.

She also visited the Departments of Gynecology and Ophthalmology of the University Hospital and was told that she had uterine myoma and eye floaters.

Present condition: Marked erythroderma which was caused by solar dermatitis.

Abdominal condition: Stuffiness in the epigastric region

Tongue condition: White moss, veins (+).

Examinations: UV test 10 seconds and more (+).

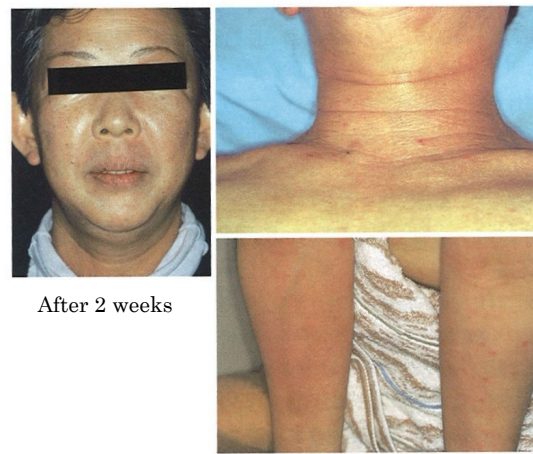
Treatment and course

Inchingoreisan 5.0g, *tsudosan* 5.0g, and *byakkokaninjinto* 6.0g were administered for 14 days.

The patient had a favorable course with remaining hot flashes and dry mouth (+). In two weeks, they were mostly recovered.

Inchingoreisan 5.0g, *tsudosan* 5.0g, and *keigairengyoto* 5.0g were administered for 14 days.

A cure was achieved.



The SDS 42 (training on autonomic nervous functions) was conducted. Total cholesterol 239mg/dl↑ LDL cholesterol 169↑ β globulin 10.6↑