

NOTES ON POISONING BY PRIMULA OBCONICA.

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[Read in the Section of Medicine, May 19, 1899.]

THE following notes on poisoning by *primula obconica* were suggested by a case which lately came under my care. The patient, who came to see me on 23rd September, 1898, was a lady who was very fond of gardening, and had in her greenhouse some fine young plants of *primula obconica* which she tended daily. For the seven previous weeks she had had irritable red patches on the wrists and forearms, with here and there the surface broken.

The eruption came out suddenly, appearing on the wrists and lower half of the forearms within twenty-four hours. In a few days it died away from the arms, and, as it did, came out at the back and sides of the ankles ; in about a month the rash recurred on the wrists and arms, and had, when I saw her, remained out for about three weeks, although the plants were no longer being tended. The rash varied in appearance—sometimes it was urticarious, sometimes eczematous, and occasionally papules formed and passed on into pustules. There were attacks of intolerable itching, and sometimes of severe neuralgic pain ; and all the time, whether the rash was visible or not, the patient had epigastric uneasiness and felt sick and out of sorts.

The progress was slow ; bathing the affected regions with very hot water, and the application of dilute citrine ointment giving most relief.

On glancing over Neale's Digest and recent volumes of the medical journals, and such papers as *The Garden, Gardening*, and the *Gardeners' Chronicle*, a number of references will be found to toxic symptoms following contact with primula plants.

Primula obconica was introduced into this country about 1880, and as it flowers freely all through the winter it has rapidly come into favour. It has loose umbels of pale lavender blossoms and slightly tapered leaves from whose shape it derives its specific name.

Other varieties of primula also have poisonous properties, especially *P. Sieboldii*,¹ which under the name of *cortusoides amoena* was introduced into these countries about 1864.

As these cases occur amongst those handling plants the hands are most generally affected. In my case short gloves were worn when gardening, so the wrists were the seat of the disease. With gardeners the parts of the hand least well-protected by a thickened horny layer are generally affected. Thus, Dr. Allan Jamieson² describes a case where the ball of each thumb and the back and extending to the palmar surface of some of the fingers was the seat.

When other parts are affected it may be by contact, and they are then those parts which are most easily touched by the hands. Dr. Kingsley Ackland³ records the case of a lady who had repeated attacks on her hands, and on one occasion had her chin affected.

In Dr. Clark's⁴ case the eyelids were affected from rubbing them to remove flies.

Dr. Oldacres⁵ describes a case accompanied with much swelling of the face and much œdema of the eye-lids.

Dr. Wilson,⁶ of St. Andrew's, mentions the case of a lady who suffered martyrdom with an irritable rash on her neck and chest. She was very fond of the *primula obconica*, and always wore its lavender flowers in the evening.

When the favourite flower was given up the rash disappeared.

There may be extreme sensitiveness to the poison. A lady⁷ at dinner complained of irritation of the face and nose and of the body generally; four pots of this primula were on the table, on their removal the irritation subsided. Next day the irritation recurred when the lady was in the conservatory, although she was not within six feet of the plant.

Sometimes, however, as in a case of which I have notes, the rash is general, and so its extension from the parts which touched the leaves is due not to external but internal causes.

The rash varies in appearance in accordance with the intensity of the attack. In its lightest form it is a simple dermatitis with a more or less abundant crop of small red papules.¹¹ Dr. Ackland³ speaks of it as an intensely irritable papular eruption. Cases described by Dr. Oldacres⁵ had been called by some eczema, and by others urticaria. Dr. Sym¹ describes the appearance as that of a moist eczema, papulous and excoriated.

Dr. Allan Jamieson² describes a severe case as having "well-defined hard, red, scaly areas. The edge was distinctly raised and linear, the horny layer of the epidermis ragged and undermined. The general surface of the patches, which were of considerable extent, was rough to feel; thickened, and had a tendency to fissure."

The course of the disease can best be understood by comparing the descriptions of a light and a severe case. In the former,³ in a little more than twelve hours after contact with the leaves, a broad band of small papules appeared on a raised base, and gave rise to almost intolerable itching.

In a severe case as described by Dr Leighton⁹ the

patient was "suffering from tremendous oedema of the right hand, with well-marked lymphaginitis of right arm and tenderness in axillary glands. Next day there began a profuse serous discharge from several points on the back of the hand and from between the second and third fingers. The pain in the joints was excessive, and the patient was slightly feverish. The discharge continued for eight days, gradually decreasing.

In addition to the itching, which is generally urgent, there is often severe neuralgic pain,⁴ and frequently, as also occurred in my case, there are dyspeptic symptoms.⁵

The duration of the rash is variously described. Dr. Clark's case⁴ must have been mild, for desquamation ending in recovery took place in four or five days. In my case the skin trouble lasted several months, and in the case of a gardener, of which I have notes, it lasted a couple of years.

Tolerance is not easily established, as in a case published by Dr. Clark where some plants were brought indoors (their leaves being held aside daily whilst the roots were watered), the condition of the owner's hands became chronic. Several cases have been reported where handling the flowers after cure led to repeated attacks which showed no diminution in severity.

A troublesome symptom is the occurrence of relapses. My own case affords an example of this, and Dr. Leighton⁹ reports a case with two relapses, the time between the first and second being eight months, and between the second and third sixteen months.

Dr. Pooley¹⁰ reports a very interesting case—"A market-gardener who used *primula obconica* in making funeral wreaths did so with impunity until he got an attack of facial erysipelas (his son, who did not touch the plants, had erysipelas at the same time, which confirms this part

of the diagnosis), and got six relapses when working with the primula, the fingers also being affected." This susceptibility to primula poisoning following erysipelas is interesting.

The discovery of the cause of the attack is sometimes due to the patient being a reader of gardening papers. In a case reported by Dr. Oldacres⁵ the discovery followed indirect experiment—An old lady who suffered repeatedly from a troublesome rash and always got relief by going away from home read a letter in the *Gardeners' Chronicle*, and suspecting that her troubles might arise from the same cause gave up handling the plants, and received the benefit that had previously followed the change of air.

Direct experiment was made by a lady whose case is reported by Dr. Ackland³—"She bared her arm and lightly pressed a bunch of its leaves round the middle of the forearm. Nothing happened until the next day, more than twelve hours after the experiment, when a broad band of small papules appeared on a raised base, giving rise to almost intolerable itching."

Dr. Wilson,⁶ of St. Andrew's, examined the plant and found glandular hairs on the leaves, which he suggested as the cause of the trouble. Greenwood Pim, F.L.S., has kindly examined the hairs for me and reports—"The hairs on the leaf-stalk, flower-stalk, and mid-rib are of two kinds—one long and rather slender with six or seven septa and a slightly glandular tip, apparently, not functionally glandular; the others short, about two to three septa with a distinctly glandular tip, containing a yellowish-brown material, doubtless the irritant. The hairs are delicately striated under a high power. Those on the lamina are few and rather conical, also with aborted glands."

It is probable that the young freely growing leaves have most effect," and possibly some plants are more virulent

than others, as generally when the disease occurs several people are affected.

Dr. Oldacres⁵ records how a lady "by way of experiment has handled the plant a few times, which has always resulted in the return of the rash and the dyspeptic symptoms. Further, two of her nephews who have been staying with her have handled the plant to test its effect upon them, and have suffered from the rash in the same way." And a gardener¹² who tried to infect himself failed, although, subsequently, when engaged in potting plants, he got a severe attack.

¹ Dr. Alan C. Sym. *British Medical Journal*, 12th November, 1893.

² W. Allan Jamieson, M.D. *British Journal of Dermatology*. 1893. Page 140.

³ C. Kingsley Ackland, L.R.C.P., Lond. *Lancet*. 1893. Page 289.

⁴ Fred. H. Clark, M.B., C.M. *British Medical Journal*, Sept. 20th, 1890.

⁵ Charles E. Oldacres, M.R.C.S. *British Medical Journal*, 3rd July, 1889.

⁶ *Lancet*, 20th September, 1890.

⁷ *The Garden*, xlix., 195.

⁸ Dr. Alan C. Sym. *British Medical Journal*, 20th September, 1890.

⁹ Gerald R. Leighton, M.B., C.M. *British Medical Journal*, 15th October, 1898.

¹⁰ E. Burdett Pooley, L.R.C.P. *Lancet*, 22nd July, 1893.

¹¹ James Ferguson, M.B., C.M. *British Medical Journal*.

¹² *The Garden*, xlviii., 195. October 25th, 1890.