Clinical and other Notes.

VESICULAR DERMATITIS DUE TO WILD PARSNIP.

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Cases of vesicular dermatitis occurred amongst boys in the O.T.C. Camps at Tidworth Park and Tidworth Pennings in 1936. At the latter camp some fifteen boys in reserve at the edge of a wood during exercises were all affected. The lesions were very typical of mustard gas burns.

All efforts to trace the causal agent failed, although various grasses, weeds, etc., and insects, such as ants, were suspect.

I was fortunate enough to discover accidentally the cause in the following circumstances. While waiting at Bulford for the Tidworth Mess Bus (coming from Salisbury) on Derby Day, 1937, a man employed cutting grass on the roadside came along and asked me if I knew of a good cure for blisters. On inquiring the cause of the blisters I was informed that they were due to wild parsnip. This man had numerous lesions in all stages from the fresh vesicle to the healed scar; some were septic due to secondary infection.

I arranged with him to come to my house the following Friday and bring a specimen of wild parsnip.

He duly arrived in the evening with what he described as "a good strong 'un." It was a very warm evening; I was mowing my lawn when he arrived and was warm and sweaty. I rubbed my forearm gently with (a) a piece of the broken stem, and (b) the yellow flower. A blister resulted in each case.

I am indebted to the Physiological Department, Porton, for the following description of my biggest blister. (I went over there to demonstrate the remarkable similarity to the early lesions caused by mustard gas.)

"Rubbed freshly cut section from stalk of wild parsnip on to flexor aspect of forearm on Friday, June 4, 1937. Erythema on June 5. Erythema with marked irritation, pain and œdema on evening of June 5. Progressed to vesication with œdema on Sunday, June 6, 1937.

"Monday, June 7, 1937.—Well marked œdema and erythema 7 by 3½ inches left forearm flexor aspect. Smaller area of intense erythema, partly covered with tiny vesicles approximately 2½ by 1⅛ inches surrounding tense vesicle 1½ by 1⅛ inches. About 10 cubic centimetres of fluid was aspirated from this blister."
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The weed is abundant on Salisbury Plain and is known locally as "Wild Parsnip," "Heel Trot" or "Hockweed." It belongs to the natural order Aracere. It is variously referred to as Heracleum the common cow parsnip and Pastinacea Sativa the wild parsnip [1]. I am unaware if they are the same. The common name of parsnip is well deserved. The leaves are somewhat similar to the ordinary garden variety—the root is also very similar, even to the smell.

I subsequently blistered myself with six different specimens of the weed. Symptoms were uniform and came on about thirty-six to forty-eight hours after contamination. There was a marked erythema at the end of forty-four hours, with very fine dew-like vesicles just visible to the naked eye. At the end of forty-eight hours these fine vesicles had coalesced. Then the condition was very like a mustard gas burn, in fact there were no points clinically by which a differential diagnosis could be made. These blisters, unlike those caused by mustard gas, heal rapidly if treated aseptically.

I found the best treatment was to aspirate the vesicle and apply a sterile dry dressing, when the lesion healed in four or five days.

The resulting scar is somewhat fragile, in this respect also resembling mustard gas lesions, being thin, tissue-paper-like in appearance.

A bronzing then occurs, gradually disappearing. In my own case some of the scars were still visible after a lapse of six months. Even now after a year some can still be seen as a faint bronzing.

In places, such as the forearm, where the resulting scar is subject to friction or stretching, in the early stages it breaks down easily or cracks—secondary infection will then delay healing.

Although warned about the effects at the commencement of the 1937 O.T.C. camps, cases occurred. One boy who used a plant as a "fly-whisk" had numerous lesions on the face and neck caused by flicking himself with his improvised "fly-whisk."

In order to prove conclusively that the fifteen boys were thus infected in 1936 while in support in the wood already referred to, I accompanied Major Perez, R.A.M.C. (who was Senior Medical Officer, Tidworth Pennings; at the time of the occurrence) to the scene of operations, and we found lots of wild parsnip growing in the vicinity. I convinced him, to his entire satisfaction (although he started out as an unbeliever) by blistering him with two separate plants.

I have not succeeded in causing lesions on myself with every specimen I have tried, but I cannot remember failing with any when applied while hot and sweaty—this would appear to be a necessity—and is borne out by German research into dermatitis due to wild parsley [2].

There may also be a time in the development of the plant when it is more potent than at others, and the sensitivity of the recipient is also a probable factor [1].
The vesicant properties of this weed have been known for years. When I arrived at Porton on June 7, 1937, my attention was drawn to an article in *The Bulletin of Hygiene*, March, 1937, vol. xii, No. 3, on the dermatitis produced by this plant (and others), and to the full account of its properties described in the "Dermatogoses or Occupational Affections of the Skin," by Prosser White, pages 444 and 445.

My visit to Porton had a somewhat interesting and amusing sequel as the following paragraph from a London evening paper dated August 12, 1937, shows:

"A SCARE AT PORTON."

"Medical Officers at Porton Experimental Station had the same scare over poison gas infection as the London lads at the O.T.C. camps on Salisbury Plain."

"Not long ago a Blankshire County Officer found his arms and legs covered by a painful rash."

"The Officers at Porton at once suspected mustard gas poisoning."

"Later Dr. X. saw a ditcher clearing weeds with protectors on his arms. The roadman explained that when the wild parsnip flowered and was brushed by the arm it stung and produced painful wounds."

"Dr. X. recognized the flower in his orchard. He experimented and traced the rash."

Thinking he had been contaminated by mustard gas Dr. X. visited Porton several weeks after they had seen my blisters. He was reassured as to the real cause of his condition, and shown the photograph (reproduced) of my forearm, taken on June 7, 1937."
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The following day—August 13, 1937—there was a paragraph of about fifty lines in a local paper headed, "The Wild Parsnip—A Doctor's Discovery."

Summary.

(a) A dermatitis very similar to mustard gas lesions occurs as a result of contamination with wild parsnip under favourable conditions.

(b) It is essential for Army medical officers to be conversant with this fact in order that in war time cases of vesicular dermatitis due to wild parsnip may not be sent out of the line or otherwise subjected to special treatment and decontamination for non-existent mustard gas lesions.

(c) Although abundant on Salisbury Plain, its effects are not so generally known as they deserve.

(d) The effects have been known for many years. Jameson drew attention to it in the Edinburgh Medical Journal, 1897, as also did Stowers in the British Medical Journal in 1897.

I am indebted to Colonel S. G. Walker for his permission to send these notes for publication, and to the staff of the Physiological and Photographic Departments, Porton, for their help and assistance.

A most excellent coloured plate is now in the R.A.M. College Museum. Anyone seeing this will immediately notice the similarity of the effects to those of mustard gas.

References.


Prontosil in Smallpox

By Captain C. King,
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and

Assistant Surgeon K. A. de Rozario,
Indian Medical Department.

The following account of a case of smallpox in which prontosil rubrum was used may be of interest:—

Mrs. B——, aged 33, the wife of Bandsman B——, was brought into hospital at 12 noon on December 7, 1937, with a history of having been taken ill about forty-eight hours previously with feverishness, headache, shivering and backache; on arriving in hospital she still complained of headache and backache, and her temperature was 102°F., pulse 106, respiration 24: no other abnormal physical signs could be found except a coated tongue and a few scattered rhonchi in the chest.
Wild Parsnip Vesicular Dermatitis Due to R. McKinlay

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