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INTRODUCTION

A number of plants and other naturally occurring substances have been shown to cause skin irritation or cutaneous chemical burns. In many of these cases the process thought to be responsible is **phytophotodermatitis** which is an adverse skin reaction occurring when phytotoxic compounds in plant sap are activated by ultraviolet (UV) radiation. Giant Hogweed (*Heracleum Mantegazzianum*), also called cartwheel flower or giant cow parsnip (Figure 1), is known to cause this type of adverse skin reaction.



Figure 1: Giant Hogweed (*Heracleum Mantegazzianum*)

Whilst phytophotodermatitis secondary to Giant Hogweed exposure has been reported on a number of occasions, many of these cases are mild and successfully managed with conservative measures. Full thickness burns requiring operative management have been published infrequently in the literature.

Giant Hogweed grows all across the UK (Figure 2) and can be found in public areas as well as domestic gardens. Good public awareness is key to preventing severe burns from this weed.



Figure 2: A map of where Hogweed grows in the UK

PURPOSE OF STUDY

Following our burn centre's recent experience with a rare case of full thickness burns from Giant Hogweed exposure we set out to:

- ascertain awareness about the plant amongst burn professionals.
- determine which measures are already in place to raise public awareness.
- outline additional measures to increase public awareness.

METHODS

- We present our recent experience with a case of full thickness burns from Giant Hogweed exposure.
- We conducted a survey amongst burn professionals by showing them a photograph of the Giant hogweed and asking them to identify the plant and its significance to medical practice.
- We conducted a web search on available online published information factsheets and media reports on Giant Hogweed.
- We brainstormed additional recommendations for raising public health awareness

Case report

A 30 year old female presented with 1.5% TBSA burn (Figure 3), mainly full thickness, to her left thigh following contact with Giant Hogweed.

This normally fit and well patient reported contact with the weed whilst cycling in shorts. Later that day, after sunbathing at home, she noticed the development of blisters over the affected area. She presented to her local ED on the day of the injury for initial management and was referred to the Mersey burns centre where she attended three days later. She was admitted and started on antibiotics for early signs of infection. She subsequently required burn excision and grafting (Figure 4).



Figure 3: Mostly full thickness burns one week after contact with the Giant Hogweed plant



Figure 4: Post operative picture showing complete graft take

Awareness survey

A survey of 45 burns professionals was conducted. Participants included:

- plastic surgery Consultants
- Plastic surgery Registrars
- plastic surgery Senior House Officers
- burn nurses

Only 15 (33%) participants were able to identify the plant or its significance.

Published Giant Hogweed cases and information

A web search for published cases of burns secondary to Giant Hogweed and published information leaflets yielded some media reports of cases of human and pet burns from the plant. We also found useful factsheets on Giant Hogweed detailing how to identify the plant and first aid instructions. We used this information to aid the development of our own bespoke information leaflet (Figure 5).

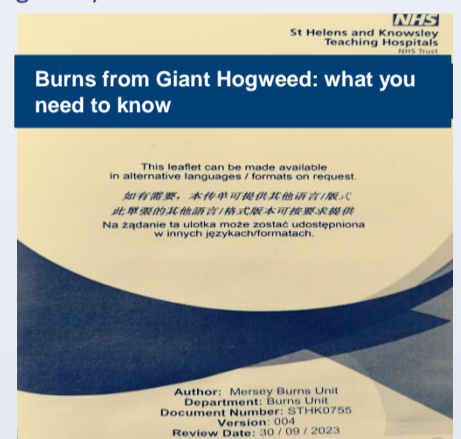


Figure 5: Giant Hogweed information leaflet

DISCUSSION

We propose the following prevention measures:

- Engaging with the local council by informing them of our experience and prompting them to clear the weed along footpaths in spring and summer along with additional signage in parks and carparks where the weed grows. Signage should include a photograph of the plant and first aid instructions.
- Engaging with the media to publish our case as a further serious incident from the weed to raise awareness.
- Dissemination of the information leaflet with information about the weed and first aid instructions to raise awareness.

CONCLUSION

Our case emphasises the on-going public health risk from Giant Hogweed. The results of our survey demonstrated low awareness amongst burn professionals who would be at the forefront of treating burns following exposure to the plant. It is likely that general public awareness would be even poorer. This study has allowed us to generate correspondence with the local councils of relevant geographic areas emphasising the ongoing risks and suggestions for increased public awareness. The plastic surgery training and exam syllabus may benefit from a minor update.

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