

Penetrating thistle bracts injury

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Penetrating corneal injury, which is one of the commonest ophthalmic casualties, may be caused by industrial and road traffic accidents, assaults with sharp instruments, animal scratches and bites, and agricultural mishaps. In the last group, perforation of the eye by thorns and twigs frequently occurs in such activities as bush-cutting and hedge-trimming.

Case report

An 8-year-old boy was admitted to the West of England Eye Infirmary with a history of having been hit in the left eye by the prickly flower base of a thistle 2 days previously. His father had hit a thistle plant with a stick and the decapitated flower base had struck the boy's eye. No discomfort was felt until 2 days later when increasing irritation made him attend at the hospital.

Examination

Three prickles about 2 mm. long were embedded in and penetrating the full thickness of the cornea. They were stiff, fine, and like needle-tips; their bases were flush with the corneal epithelium, and the shafts traversed the full corneal thickness with the pointed end protruding 1 mm. into the anterior chamber. The positions of two of the prickles are visible in Fig. 1, the third being hidden under the upper lid. The anterior chamber was normal in depth and no aqueous leak was demonstrable by Seidel's test as all the wounds were plugged water-tight by the prickles. The pupil was 3 mm. in diameter with a normal reaction. There was slight conjunctival injection and only a few cells were visible in the anterior chamber on slit-lamp examination. The visual acuity was 6/6 in the right eye and 6/9 in the left. There was no evidence of any damage to the lens and the fundus was normal.

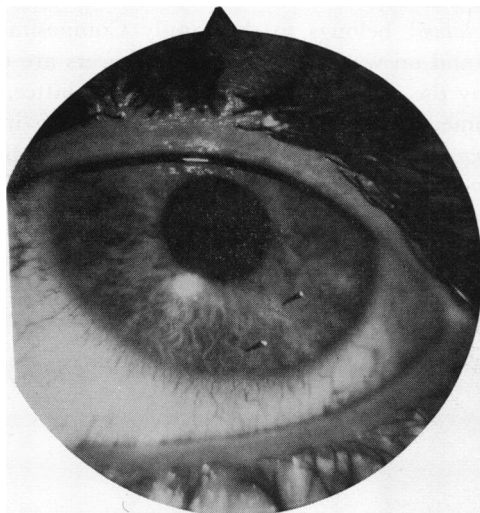


FIG. 1 *Two thistle prickles sticking into the cornea*

Management

Under general anaesthesia and using an operating microscope, one prickle was picked out with Colibri forceps. Aqueous fluid immediately gushed through the wound and the anterior chamber was lost. The remaining two prickles could not be picked out in a similar manner as the anterior chamber had collapsed and any pressure on the base of the prickle through grasping it, could have resulted in damage to the lens by the sharp end in the anterior chamber. The anterior chamber was, therefore, re-formed by placing a Rycroft's cannula over the mouth of the wound and injecting saline. The second prickle was removed in a similar manner and again the anterior chamber collapsed through leakage of aqueous. The anterior chamber was again replenished by injecting saline through the second wound; the third prickle was then picked out and the anterior chamber was again lost, but re-formed by the same process using a Rycroft's cannula. After this procedure the patient had a deep anterior chamber and three sealed tracks were visible in the cornea. Finally, soframycin was injected subconjunctivally.

Results

Postoperative recovery was uneventful and the corneal wounds healed satisfactorily, leaving minute scars. The patient was discharged 6 days later with visual acuity 6/6 in both eyes unaided.

Discussion

Ocular damage inflicted by vegetable matter may be of variable severity from mild local conjunctival reaction to the loss of an eye (Duke-Elder, 1954). Goodwin (1968) described burdock ophthalmia due to burdock shafts which are typically embedded vertically in the upper fornix with the tip protruding and causing corneal abrasions. Nodular conjunctivitis due to burdock (Hartmann, 1940) and thistle-down (Jakowlewa, 1924) has also been described. Paddy grains flying up when rice is threshed with sticks may give rise to corneal abrasions (harvest ulcer) due to the spiky hairs of the paddy husks (Joseph, 1968). Injury of a serious nature, not infrequently ending in blindness, may be caused by the penetration of the mesquite thorn, which secretes a wax containing cerotic acid which is an irritant to the eye (Brunner and Bieberdorf, 1950). Penetrating wounds by aloe barb may also cause toxic iridocyclitis and take a severe course (Sédan and Roucher 1956). The penetrating injury described above, which was caused by the hard prickles of the spear thistle, took a relatively benign course.

The spear thistle (*Cirsium lanceolatum*) belongs to the family Compositae and grows abundantly in fields and pastures, and on waste ground. The flowers are crowded into heads (capitula) and surrounded by the flower base (involucre); the latter, as shown in Fig. 2, is composed of rows of numerous bracts, all narrow and ending in sharp hard prickles (Hutchinson, 1955; Butcher, 1961). Three such prickles were embedded in the cornea, the impact of the flying involucre having caused the penetration. The nature of

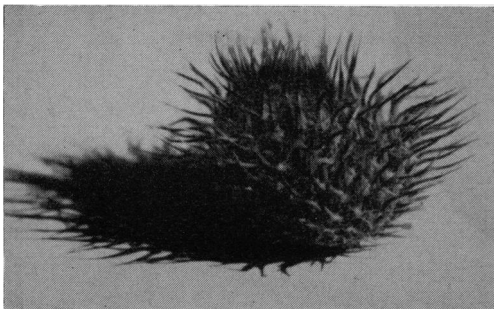


FIG. 2 Appearance of prickly base of thistle head

these prickles, apart from causing mechanical injury, seems to be innocuous, as for 2 days they were embedded in the cornea and protruding into the anterior chamber without provoking any marked reaction or uveitis, or even any great discomfort to the patient.

Summary

A case of multiple penetrating injuries by thistle bracts has been reported. Three prickles were embedded in the cornea with the sharp tips protruding into the anterior chamber and the measures adopted for their removal are described. The embedded prickles were innocuous to the eye apart from causing mechanical injury.

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