

Allergic contact otitis externa due to iodoform in BIPP cavity dressings

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Case Reports

We report 3 cases of allergic contact otitis externa due to the iodoform component of bismuth subnitrate and iodoform paraffin paste (BIPP) at our hospital over a 3-year period. All 3 cases were women who had had their external auditory meatus and concha packed with BIPP-impregnated gauze following surgery (Table 1). Clinical presentation was variable. In Case no. 3 a florid eczematous reaction developed, which extended to the forehead (and crossed the midline) 1 day after surgery, the patient having been previously exposed to BIPP. In contrast, in Case no. 1 the presentation was with mild erythema and swelling of the concha 3 weeks postoperatively after removal of the BIPP pack.

All patients were patch tested to the European standard series and an ear series (Table 2).

Discussion

Bismuth subnitrate and iodoform paraffin paste (iodoform 33%, bismuth subnitrate 17% and liquid par-

Table 2. Departmental ear medicament series

phenazone 10% pet.
tetracycline 10% pet.
tyrothricin 10% pet.
nitrofurazone 1% pet.
bacitracin 20% pet.
gramicidin 10% pet.
nystatin 10% pet.
polymyxin B sulphate 3% pet.
paradichlorobenzene 0.1% pet.
sulfacetamide 5% pet.
gentamycin 20% pet.
chloramphenicol 10% pet.
framycetin sulphate 10% pet.
polyethylene glycol 400 30% pet.
potassium hydroxyquinolone sulphate 1% pet.
bismuth subnitrate 10% pet.
iodoform 10% pet.

affin 50%), abbreviated to BIPP, is an antiseptic astringent preparation used to pack cavities after dental and ear surgery. It was a popular preparation at the beginning of the 20th century and continues to be commonly used by some ENT and dental practitioners. Allergic contact dermatitis due to the iodoform (1) component appears to be more common than allergic contact dermatitis from bismuth subnitrate (2), which is an insoluble salt. 5.9% of 185 patients were reported to have localized reactions following the use of BIPP-impregnated ear packs (3), but patch testing was not carried out.

BIPP is commonly kept in contact with the skin for prolonged periods when used in wound cavity packing, increasing the potential for contact sensitization. Elemental iodine is re-

leased from iodoform (triiodomethane), at high temperatures and in the presence of granulation tissue, creating an antiseptic environment. Only in Case no. 1 was iodine tested and was negative. The allergenicity of iodine is reduced when complexed with a carrier molecule, which may explain why this patient had a negative patch test reaction to povidone-iodine. However, on this evidence, it is not entirely clear what advice should be given to patients regarding the avoidance of iodine preparations.

References

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Table 1. Patch test results

Patient no.	Age/Sex	Operation	Iodoform 10% pet.		Bismuth subnitrate 10% pet.		Betadine ointment 100% (povidone-iodine)	
			D2	D4	D2	D4	D2	D4
1	16/F	Myringoplasty	+++	+++	–	–	–	–
2	13/F	Myringoplasty	++	++	–	–	NT	NT
3	52/F	Mastoidectomy	+++	++	–	–	NT	NT