

## Burow's solution for external otitis

### Scientific summary

**Treatment of external otitis today** consists primarily of topical solutions / suspensions in the form of anti-inflammatory steroids, with or without antibiotics. Acidifying / astringent solutions can also be included in the treatment therapy. Alcohol solutions, both ethanol and 95% isopropyl alcohol, are also used, but are generally considered to be too irritating to the skin and wax in the external ear canal.

**A well-known and well-documented solution** for the treatment of external otitis is a combination of acetic acid and aluminum acetate solution - Burow's solution. Several clinical studies show that Burow's solution is a safe and effective treatment<sup>1,2</sup> and has been found to be at least as effective as medicines containing antibiotics and steroids<sup>3,4</sup>.

**Broad antimicrobial effect** has been shown with Burow's solution<sup>1,2,5</sup>, which can be explained by a combination of the solution's low pH and content of aluminum acetate. Ears infected with antibiotic-resistant bacteria such as MRSA and PRSP have been treated with good effect with Burow's solution.<sup>1,2</sup>

**Clinical efficacy** has been demonstrated in patients with external otitis / refractory otorrhea / chronic ear disease.<sup>1,2,3,4</sup> The effect is seen on both bacteria and fungi.<sup>1,2</sup>

**No significant side effects** have been reported in the studies using Burow's solution as a topical treatment. The safety of Burow's solution is also supported by an ototoxic study in guinea pigs. However, injections of Burow's solution into the middle ear have been reported to have some ototoxic effect which should be considered when Burow's solution is used to treat inflammation in the middle ear or when the eardrum is perforated.

**Otinova® ear spray** consists of Burow's solution and is produced in accordance with the requirements of the monograph "Aluminum acetate Ear drops" published in the British Pharmacopoeia. Otinova® ear spray is registered with the Medical Products Agency as a medical device, class I, for the treatment of Otitis external.

**A non-antibiotic, anti-microbial solution for the treatment of external otitis** is Otinova® ear spray, thus filling an important medical need. Today, antibiotic resistance is a growing problem in society. Microbiologists believe that antibiotics should be avoided in the treatment of external otitis and instead should e.g. Burow's solution is being considered.

#### References:

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2. Kashiwamura et al, Otol Neurotol 2004, 25, 9-13
3. Lambert, J Royal Coll General Pract 1981, 31, 291-294
4. Clayton et al., Clin Otolaryngol Allied Sci 1990, 15, 7-10
5. Hyo et al, Med Mol Morphol, 2012, 45: 66–71
6. British Pharmacopoeia, monograph "Aluminium Acetate Ear drops".

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