

ISOSORBIDE IN MENIERE'S DISEASE

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SUMMARY

The results of isosorbide treatment which was used in twenty patients who had been diagnosed as Meniere's disease were presented. Isosorbide was found most effective on the control of vertigo (% 70). The hearing improvement was observed in five patients, however it was temporary, returning to its pretreatment levels after treatment. Isosorbide is a drug which should be chosen in the treatment of the acute attack of Meniere's disease.

Key Words: Isosorbide, Meniere's disease.

INTRODUCTION

Although a lot of literature has appeared since Prospero, Meniere first described the disease as a clinical entity, the treatment of Meniere's disease still remains controversial (1). Recently Yamazaki reported successful results with an oral hyperosmotic diuretic, isosorbide (2). For this reason isosorbide was used to determine its effects on the symptoms of Meniere's disease during an acute attack.

MATERIALS AND METHODS

Isosorbide was used in 20 patients with acute attack of Meniere's disorder. 70-140 ml of 70 % isosorbide was given in three equally divided doses daily for at least one month. The patients who had got the diagnosis of Meniere's disease and had been followed for a long period and had resisted the other conservative treatments were included in the study. The patients were monitored with routine otoneurological test methods and followed one year or more. Clinical improvement of symptoms of vertigo and hearing loss was recorded.

Isosorbide is an alcohol produced by extracting two water molecules from Sorbitol. It is reabsorbed easily through the intestine and excreted in the urine. It has no known side effects and causes less gastric irritation than glycerol. It reduces the cerebrospinal fluid pressure with its diuretic effect like mannitol and urea.

RESULTS

Twenty patients who received isosorbide treatment at least for one month were followed one year or more. Only the objective symptoms such as vertigo and hearing loss were evaluated. If vertigo recurs or

if the hearing fails to improve more than 10 dB in any of the speech frequencies, the treatment was accepted as failure.

The hearing of five patients improved only in low frequencies (<2000 Hz). The mean average of hearing improvement was about 15 dB. The hearing improvement was temporary and returned to its pretreatment levels after the treatment. Fourteen patients (% 70) relieved from vertigo during their follow-up period of one year or more. But bithermal caloric test showed no change after treatment.

DISCUSSION

Acute attacks of Meniere's disease presents a challenging problem to the clinician. It sometimes prevents the patient to do his daily works and to meet his simplest needs.

No agreement has been reached until now about the treatment of the disease. While some authors favour drugs which suppress the symptomatology, others believe the treatment should be directed more towards the correction of the cause (1). One of these drugs used recently is Isosorbide (2).

Klockhoff reports the ingestion of glycerol by mouth frequently produces a temporary improvement of the hearing in the affected ear in cases of Meniere's disease in its early and intermediate stages but no in other conditions (3). Fusaki believes that the diuretic furosemide is a better agent than glycerol and it produces much fewer side effects (4). Some authors prefer to use urea and mannitol instead of furosemide. It is thought that Isosorbide produces an intracochlear damping effect either directly by decreasing the amount of endolymphatic hydrops or indirectly by lowering perilymphatic pressure simultaneously with the lowering of intracranial pressure (4). Isosorbide affects more slowly than mannitol or urea, but perhaps it is this peculiarity which makes isosorbide so successful in the treatment of Meniere's disease. Moreover it causes less gastric irritation than glycerol and the side effects of urea and glycerol have not been seen with isosorbide.

Our results show that isosorbide is more effective in

the treatment of vertigo than that of hearing loss. Isosorbide treatment resulted in complete relief from vertigo in 14 patients and hearing improvement in 5 patients. Our results seem much better than Yamasaki's in the treatment of vertigo. This is perhaps due to our longer use of isosorbide (1 month or longer). The selection of the patients may also play an important role in the treatment, because the longer the duration of the disease, the less successful is the treatment (5).

As to hearing improvement, our results were not so good as Yamasaki's. Although hearing improved in five patients, this improvement was temporary (only during the treatment), later it returned to its pretreatment levels.

As a result it can be said that isosorbide is one of the drugs which should be chosen in the treatment of the acute attack of Meniere's disease.

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