

# **The Effect of Dimetikon on Disturbing Bowel Gas at Intravenous Urography**

## *A double-blind study in 200 ambulatory patients*

Bengt Morelli

*From the Department of Diagnostic Radiology, Sahlgren's Hospital, Göteborg, Sweden*

### ABSTRACT

In a randomized double-blind study in 200 consecutive, ambulatory patients, admitted for intravenous urography, dimetikon in a dose of 0.2 g 4 times daily, 3 days before examination, had no effect on the amount of disturbing bowel gas.

### INTRODUCTION

A common and recurrent problem at intravenous urography is the presence of disturbing bowel gas. This often leads to the use of tomography which prolongs the examination and gives the patient an additional radiation dose. Therefore, it would be of great value to find a simple method without adverse effects to remove disturbing bowel gas. Dimetikon (Minifom, Tika, Lund, Sweden) is a surface tension reducing preparation. It has a well documented effect on the symptoms of so called 3-months colic (Westphal & Medin, 1972). It has also been used in adult patients in cases of meteorism, borborygmia, flatulence and post-operative distension of the gastro-intestinal canal. It would seem likely that this preparation also could eliminate disturbing bowel gas at roentgen examinations. Ausman (1965) reported a study on 147 patients that simethicone was very effective in the preparations for urography. Simethicone is an American silicone preparation, very similar to dimetikon. The difference being that dimetikon has a slightly larger mean molecule size which is considered to give lesser risk for absorption from the gastro-intestinal canal.

### MATERIALS AND METHODS

To evaluate the effect of dimetikon on disturbing bowel gas a randomized double-blind study was performed in ambulatory patients referred for intravenous urography.

The standard preparations in our department before urography were used: 10 mg of bisacodyl (Toilax, Erco, Stockholm, Sweden) daily 2 days before the examination and a micro enema in the morning of the day of the examination. In addition,

2 capsules containing 0.1 g dimetikon or placebo were given 4 times daily, 3 days before the examination. The patients received a bottle with code number containing 24 capsules and instructed to bring the empty bottles back to increase the probability that the capsules were really taken. Neither the patient nor the examiners had knowledge, whether dimetikon or placebo had been taken.

The intravenous urographies were performed in a standard manner. The evaluation of the roentgenograms was performed by two trained radiologists. The amount of bowel gas was graded on a 4-point scale as follows: very large, large, moderate and minimal amount of gas. When 200 consecutive patients had been examined, the code was opened and it was found that 93 patients had received dimetikon and 107 patients placebo.

### RESULTS

The results is seen in the Table. Statistical analysis also failed to show any difference between the groups.

Table 1. Amount of disturbing bowel gas at intravenous urography after preparation with dimetikon and placebo.

	Dimetikon (Number of patients)	Placebo (Number of patients)
Very large	65	56
Large	29	29
Moderate	10	6
Minimal	3	10
	107	93

### DISCUSSION

The findings are contrary to those reported by Ausman in spite of the fact that dimetikon in this examination was given in both larger daily doses and for longer time than in his study. This can be explained by the inhomogeneity of his patient material and by the fact that he did not use a double-blind technique. It should be emphasized that dimetikon when used on other indications needs a relatively long time to show maximal effect. The aim of this study was, however, to test a method of preparation that was practical to use in ambulatory patients and therefore, a preparation time of three days was chosen. Bedridden patients are generally considered to be more prone to collect a large amount of disturbing bowel gas and it is possible that dimetikon could have better effect in this group. However, most of the ambulatory patients in this study had large amounts of gas in their codon.

#### REFERENCES

1. Ausman, D.: Preparation of special X-ray studies with dimeticon. *Geriatr Soc* 13: 307-312, 1965.
2. Westphal, O. & Medin, S.: Behandling av 3-månaderskolik med ytaktiv substans. *Läkartidningen* 69: 3331-3334, 1972.

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Address for reprints:

Bengt Morelli, M.D.

Department of Diagnostic Radiology

Sahlgren's Hospital

S-413 45 Gothenburg

Sweden