

## APPLICATION OF SODIUM ALGINATE FOR PROLONGATION OF INTRAVESICAL EFFECTS OF LIDOCAINE AND OXYBUTYNYN IN TREATMENT OF BLADDER PAIN SYNDROME

### Hypothesis / aims of study

Intravesical instillations of lidocaine and/or oxybutynin widely used for reduce pain and frequency in treatment of BPS. Main disadvantage of this method is short duration – soon after urination all symptoms return. The way for prolongation of effect can be mixture of lidocaine and oxybutynin with some polar molecule, such as sodium alginate. It can increase adhesion of composition to the urothelium, thereby effects of this mixture can be longer than without sodium alginate. We decided to estimate efficacy of composition, contains sodium alginate with lidocaine and oxybutynin in comparing with lidocaine and oxybutynin only.

### Study design, materials and methods

40 female patients, suffered from BPS were involved to trial. They were randomized equally divided into two groups.

1) Patients of first group have taken an instillation of 50 ml of 1.5% solution of sodium alginate with 250 mg of lidocaine and 30 mg of oxybutynin.

2) Patients of second group have taken an instillation of 250 mg of lidocaine and 30 mg of oxybutynin only.

The bladder pain intensity was measured with VAS before instillation. After instillation patients marked pain level on VAS every three hours until pain reach level, which was before instillation.

### Results

Average pain level before instillation was 7.3 VAS.

1) In first (sodium alginate) group pain returned in 14.5 hours (6 - 24).

2) In second group pain returned in 5.55 hours (3 - 9)

There is the significant difference between two groups.

### Interpretation of results

Composition "lidocaine/oxybutynin with sodium alginate" works longer, than composition without it. It means that this mixture can be used for intravesical administration with prolongation of lidocaine, oxybutynin or other drug's effect.

### Concluding message

Officinal preparations for intravesical administration can be perspective for treatment different types of bladder's disease, especially in combination with compounds, which can prolong its effects.

### Disclosures

**Funding:** NONE **Clinical Trial:** Yes **Public Registry:** No **RCT:** Yes **Subjects:** HUMAN **Ethics Committee:** Local Ethics Committee of Kuban State Medical University **Helsinki:** Yes **Informed Consent:** Yes