CAPACITY FOR BIOADHESION TO VAGINAL CELLS OF AN INNOVATIVE POLYMER-BASED INTIMATE HYGIENE CLEANSER
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Objectives
Preparations containing biopolymers to facilitate contact and adhesion are useful to protect the epithelium and mucosa of the genital tract in gynaecology. It is not easy to detect the presence of the preparation on cells as equally transparent under the microscope. Aim of the study was to achieve direct visualisation (using a specific marker) of the presence of a feminine cleanser based on sage and calendula extracts combined with xanthan gum, a film-forming polymer.

Methods. Vaginal cells (3x10^5/mL) were collected from healthy not pregnant women aged 24-48 years, who had no clinical signs of infection. The cells, washed, centrifuged and mounted on microscope slides, were put in contact with saline (control) for 5 min while those from a 2nd set were put in contact with the feminine cleanser (Saugella idraSerum, Rottapharm|Madaus) (undiluted, and at dilutions of 1:2, 1:4) for 5 min. The cells were subsequently washed with saline and coated for 3 min with a specific inorganic marker, i.e. a suspension of red iron particles (Sigma) (diameter approx. 2-3µ). They were inspected using Nomarski differential interference contrast microscopy. Adhering particles of red iron were also counted for 40 control and 40 cells treated with each dilution of the cleanser.

Results. Cell fields treated with saline showed that there were hardly any adhering particles, while the surface of those treated was coated with a quantity of particles that varied in proportion to the dilution used, as a marker of the presence of the cleanser. The particle count confirmed it, with a statistically significant difference up to the dilution of 1:2.

Conclusions. The data confirm contact and cleanser's capacity for bioadhesion. Methods involving the use of chemical stains inserted into the cleanser have not been successful in demonstrating differences as the cells themselves were stained too.