Introduction

Three to five percent acetic acid solution is used in colposcopic examinations. Acetic acid cleans the mucosal artifacts and gives the cervix epithelium acetowhiteness, making it easier to direct biopsy. In this case we present a vaginal mucosa chemical burn injury because of the misapplication of 98% acetic acid in colposcopic examination, which was treated with local oestrogen and antibiotics safely and efficiently.

Case Report

A 28 years old G0 P0 patient had menorrhagia and ASC-H in her pap smear. During the pelvic examination, myoma uteri was diagnosed, a myomectomy and colposcopic examination under general anestesia was planned. In the operation room, instead of 5% acetic acid, 98% acetic acid solution during colposcopic examination was missapplied under general anestesia. In a few minutes vaginal mucosa was erythematous and bullous because of corrosive vaginal burn injury. Vaginal mucosa was immediately irrigated with saline infusion and treated with local oestrogen and antibiotics. After two weeks, chronic erosive cervisitis was seen on the cervix and no sign of erythematos and bullous structure was apparent in the vagina. Full recovery took two weeks.

Discussion

The trivial name acetic acid is the most commonly used and officially preferred name by the International Union of Pure and Applied Chemistry (IUPAC). This name derives from acetum, the Latin word for vinegar. The synonym ethanoic acid is a systematic name that is sometimes used in introductions to chemical nomenclature.

Acetic acid, also known as ethanoic acid, is an organic chemical compound with the formula CH₃COOH best recognized for giving vinegar its sour taste and pungent smell. Pure, water-free acetic acid is a colourless liquid. Asetic acid is corrosive, and its vapour causes irritation to the eyes, a dry and burning nose, sore throat and congestion to the lungs.

It is widely used in biochemistry for the precipitation of macromolecules such as proteins, DNA and RNA. Its sodium salt is used as a weedkiller. Solutions containing trichloroacetic acid as an ingredient are used for tattoo removal and the treatment of warts, including genital warts.

The female lower urinary tract and vagina are thought to be target tissues for the action of oestrogen, and cytological changes have been observed with physiological variations in hormonal environment and following oestrogen therapy.

Key Words: Colposcopy, Misapplication of Acetic Acid, Treatment
Oestrogen exerts its effect on target tissues via specific receptors for oestrogen, which, when activated by the presence of the hormone, modulate transcription of DNA to produce a cellular effect. The action of oestrogen receptors is associated with powerful cellular growth factors such as epidermal growth factor, and insulin like growth factor and one another mechanism by which oestrogen may exert its effect on target tissues is by promoting cell growth and proliferation.

The confirmation at a cellular level of the action of oestrogen as a stimulator of cellular proliferation in the female lower urinary tract and vagina justifies oestrogen as a treatment for symptomatic atrophic changes in these tissues. The most effective therapeutic use of oestrogen in lower urinary tract dysfunction in postmenopausal women is the prevention of recurrent urinary infections. We thought that, oestrogens would heal the vaginal chemical burn injury. Topical vaginal oestrogen is safe, convenient and easy to apply. It restores the vaginal mucosa in postmenopausal women like vaginal burn injury, thereby preventing urinary infections.

References