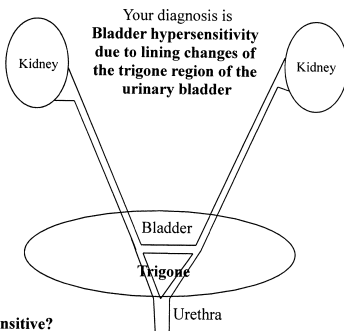


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Why is the bladder more sensitive?

The trigone region of the bladder in women contains receptors for the female hormones of progesterone and estrogen produced by the ovaries (or found in birth control medications)(see info other side). For some women, during times of elevations of these hormones in the menstrual cycle, the trigonal region of the bladder will undergo a lining change. This changes the normal impermeable barrier of the bladder lining to a lining like the vagina which is flakey when under water. Due to the flakey lining, there can be tiny amounts of blood in the urine and for some, the urine irritants get down to the nerves just under the bladder lining and lead to a feeling of frequent need to urinate. (This feels much like a bladder infection which also causes flaking off of the lining and exposure of the nerve endings, but with hormone changes no bacteria are involved). This phenomenon does not occur in the post-menopausal state unless receiving hormone replacement. It is a benign process other than the symptoms some experience. It will not lead to other problems. For many women, the problem will lessen after 3-6 months or after pregnancy but may return at times over the years. It should go away after menopause if not receiving hormonal replacement .

Management suggestions:

1. First try using Pyridium 200mg tablets 2 to 3 times per day or its equivalent: Uristat (an over-the-counter medication at half strength) which is a numbing agent for the bladder. It will numb the exposed nerve endings under the flakey bladder lining and reduce the urge and frequency of urination. It causes no side effects and is not a drug.
2. The second measure to try for relieving the symptoms is to neutralize the irritating urinary acids that are normally eliminated by the kidneys to regulate your blood acid level. A slow release drug-free mineral salt (Potassium citrate) Urocit K 10meq --- one tablet two or three times per day or over-the-counter Sodium Bicarbonate 650 mg every 6 hours (baking soda is the same). This will soothe the irritation and should be taken whenever there is increased urinary frequency and urge to urinate.
3. If you are concerned you may have a bacterial urinary infection and you don't have any urine test forms from Dr. Cannon, call his office and a form for urinalysis and urine culture can be faxed to a local lab or mailed to you and results will be available in 48 hours. If necessary, a short course of antibiotics can be prescribed while awaiting results.

Information Pertaining to Pseudomembraneous Trigonitis: (Obtained for computer literature search)

AU - Pacchioni D Revelli A Casetta G Cassoni P Piana P Tizzani A Sussolati G Massobrio M

TI - Immunohistochemical detection of estrogen and progesterone receptors in the normal urinary bladder and in pseudomembraneous trigonitis.

SO - Journal of Endocrinological Investigation 1992 Nov;15(10):719-25

AB - According to recent studies showing the presence of estrogens receptors in the human female lower urinary tract, we performed estrogens receptor and progesterone receptor assays in fresh frozen and paraffin embedded biopsies taken from the urinary bladder. Fourteen females undergoing endoscopy during staging for gynecological cancer (endometrium, cervix, ovary) and 15 women complaining of recurrent abacterial cystitis (pseudomembraneous trigonitis) were enrolled in the study as Group 1 and Group 2, respectively. After informed consent, they were submitted to cystoscopy, during which two biopsies were taken: one on the trigonum and the other on the bladder lateral wall. Estrogens receptors were identified in both groups only in the trigonum (7/14 patients in Group 1 and 8/15 in Group 2), whereas the bladder lateral wall always stained negative. Progesterone receptors were found at both sites in both groups (11/14 cases on the trigonum and 7/14 on the bladder lateral wall in Group 1; 11/15 and 2/15 respectively in Group 2). Morphological localization of progesterone receptors showed intense omogeneous staining in the nuclei of the stromal fibroblasts too. A clear correspondence between the presence of steroid receptors at the squamous metaplasia of the trigonum was observed. These data are discussed speculating about a possible endocrine pathogenesis of pseudomembraneous trigonitis.

Authors Jost SP. Gosling JA. Dixon JS.

Title The fine structure of human pseudomembraneous trigonitis.

Source British Journal of Urology. 64(5):472-7, 1989 Nov.

Abstract

The present investigation provides a histological and fine structural description of pseudomembraneous trigonitis, an ill-understood metaplastic condition affecting particularly the female trigone. Normal trigonal urothelium consists of 3 cell layers (basal, intermediate and superficial), whereas pseudomembraneous trigonitis constitutes many layers of stratified squamous epithelium. The basal cells contain prominent nuclei with condensed chromatin, nucleoli and nuclear bodies. The cytoplasm of these cells is rich in mitochondria. The profiles of the urothelial cells become progressively elongated, their nuclei increasingly smaller and their content of cell organelles gradually reduced as the luminal surface is approached. The squamous surface cells, linked by desmosomes, retain many longitudinally arranged fine filaments, together with an occasional degenerate nucleus. The mitotic index of pseudomembraneous trigonitis is 0.17% (SD 0.09%), i.e. significantly higher than normal (0%).