ABSTRACT

Neutrophil cytoplasmic granules are abundant and have a smaller size than monocytes and eosinophils and larger than lymphocytes. Cluster sample were collected in AliNasab hospital Department of Pathology patients’ pathology with age from 19 to 53 years. Provided that the total of 94 patients and 11 samples from each patient were available slides. Samples immediately after sampling were fixed with ethanol, methanol and acetone and transported to the laboratory. According to Sigma - Aldrich Cytochemical staining was performed. First Infection was assessed by staining agents Papa Nicolas hospital and then to confirm the Color Gram, Giemsa and Periodic acid Schiff was performed. In the age group of 15-25 years, 7,14% neutrophils were observed as normal, 14-29% neutrophils were bound form and 57,78% were remained as the segmented neutrophil. In the age group of 25-35 years, normal neutrophils were 11,63% and 34,88% neutrophils were bound form, 49,53% neutrophils were observed as the segmented form.

INTRODUCTION

The morphological study of the BACOVA (Annex I), which integrates two basic vaginal functions evaluation. The systemic regulation of the vaginal microbiota using Nugent score (NS) (Nugent IR., 1991) and the simultaneous determination of the Vaginal Inflammatory Response (VIR) (Geisler WM et al., 2004), allow the precise diagnosis of the two most (Spence D et al., 2007). highly frequent vaginal pathologies: Vaginosis and Vaginitis and with a high predictive value, cases in which both alterations are present Reproductive Health care (Feb 2012). RIV is established with a high efficiency counting procedure for leucocytes in de vaginal content. Vaginosis is defined, based on the alteration of the healthy vaginal ecosystem and demonstrated absence of VIR (Landers DV et al., 2007, Nugent IR et al., 1991, Spiegel CA., 1991). Vaginitis shows presence of significant VIR in the vaginal content, with or without alterations of the healthy vaginal ecosystem (Reproductive Health care (Feb 2012, Donders Gget al., 2002, Spiegel CA., 1991). Vaginitis, with or without simultaneous vaginosis. The etiology of vaginosis is not definitely clear (Marazzo JM., 2006). However, there is agreement that the metabolic factors include a systemic imbalance of the "estrogen factor" and/or an alteration in the innate proinflammatory response as a stage previous to the alterations in the complex function (sexual / reproductive) of the vagina (Reproductive Health care (Feb 2012). Vaginitis as a basic diagnostic evidence, requires the presence of VIR in the vaginal content, and the etiology could or could not be infectious. As exceptions, with very low frequency in fertile age, VIR could be associated with atrophic non-infectious vaginitis (Landers DV et al., 2007). Its significant increase of leucocytes in the vaginal content is a strong sign of the vaginal, cervical and/or upperurogenital infection. There are few specific infectious agents that produce real vaginitis, but two of them, Yeast and Trichomonas, have a universal and high prevalence.

MATERIALS AND METHODS

Sterile speculum, sterilized cotton swab, slide glass, diamond pen, ethanol, methanol, all of absolute acetone, Kits of Heat stain, Giemsa, Ziehl-Neelsen, blue Toluidine
also Chloroethyl acetate AS-D kits myeloperoxidase, Sudan black B, Alpha- naphthalene propanoic acid esterase, acid phosphatase, Periodic acid-Schiff all manufactured by Sigma - Aldrich, production of Germany. The results of the Papanicolaou staining in the Tabriz Ali Nasab Eram Hospital on the same samples were performed. Olympus microscope with magnification imaging company X100.

**Sampling:**
By information from hospital documents of Tabriz in the sampling Pap smear and through carried out former coordination to hospital admission, and women who, because of problems Vaginal Pap test were referred to hospital in the age category 19 to 55 years of sample were collected. Attending random cluster sampling from each patient11 slides of vaginal mucous samples were taken immediately after sampling and drying slides Fixation solution, all samples were fixed.

**Preparation of samples and vaginal smear:**
Vaginal mucosa samples were taken from each of 11 slides By cotton swabs and slides all of by The dried slides were coded by diamond pen temporary solution Fixation unit for 1 share as ethanol, methanol and 3 share 1 share of acetone was prepared and then fixed in the box Preparation of documentation and the Laboratory of Immunology we’ve transferred Lahijan Azad University. In order to Evaluation of the infection of 1 Lam of each sample was Papanicolaou staining. The slides were stained for confirmation the presence of Normal bacterial flora of bacteria and detection of Heat. In order to confirm the diagnosis of fungus infections of Lam Papa Nicolas one Lam from each sample Toluene were painted by blue color. Ziehl-Neelsen staining for the detection of M. Then we did it. In the Next to detect protozoan normal flora as well as the pattern of leukocyte one Lam The slides were stained with Giemsa stain series of data based on cell morphology White, staining the white blood cells in the population are considered to be preliminary So if there is a disruption in the collection of samples, so Evaluation of white blood cells influence is clarified. In order to Evaluation of the differential diagnosis of mature cells based on Lytkvheat Classic 5 1D epithelial cells made, white blood cell patterns, coloring Cytochemical Chloroethyl esterase, Alpha-naphthalene propanoic Phosphatase acetate esterase, acid-AS-D myeloperoxidase, Sudan black B, Nftvl Phosphatase, Periodic acid-Schiff using commercial kits manufactured by Sigma-Aldrich.

Assess the suitability of specimens for Pap tests:
Assess the suitability of the sample to be tested by staining by Papa Nicolas The pathologist examined and the results are divided into three categories, namely within Epithelial, beginning cellular changes, see descriptive diagnosis, normal limits cell abnormality, see descriptive diagnosis.

Pathogen detection:
Lam stained with Papanicolaou colors, heating, Giemsa, blue toluidine and acid periodic. Schiff were included to identify the pathogen and normal flora diagnosis. Review slides Olympus microscope imaging done on the basis of Heat stain morphology cocobacill and heat-positive bacteria and negative, yeast and protozoa observed. With purple bacteria are heat positive and heat negative part is pink It also changes with leukocyte cells in the vaginal area and observed Epithelial cells rather than study for detection of viruses and bacteria. Therefore intracellular buildup of both subspecific taxa was divided into 4 categories causative factors which are respectively viral, Protozoan, Bacterial, Fungal.

Changes in cell morphology:
All changes in appearance of including changes in inflammatory cells, epithelial cells, abnormal, Operative changes acute or chronic infection Papanicolaou staining were examined and Which were classified in the following way. The response of tissue cells into three categories: low, moderate, and severe tissue reactions were divided into three categories: Typical repair, Follicular cervicitis and Atrophic vaginitis. Abnormalities of the epithelial cells are divided in three categories: Atypical squamous cells of undetermined significance, High or low grade squamous intraepithelial lesion and Invasive squamous cell carcinoma. Also, the percentage of people was examined who have an acute inflammation.

**RESULTS**

**Neutrophil:**
Rounded neutrophils were seen with a segmented core (one to five) and chromatins with variable frequency of staining. Neutrophil cytoplasmic granules are abundant and have a smaller size than monocytes and eosinophils and larger than lymphocytes.

In the age group of 15-25 years, 7,14% neutrophils were observed as normal, 14-29% neutrophils were bound form and 57,78% were remained as the segmented neutrophil. In the age group of 25-35 years, normal neutrophils were 11,63% and 34,88% neutrophils were bound form, 49,53% neutrophils were observed as the segmented form. In the age group of 35-45 years, normal neutrophils were 10,34% and 03,31% neutrophils were seen as bound, 58,62% neutrophils were observed as the segmented form. In the age group of 45-55 years, normal neutrophils were 12,50% and 37,50% neutrophils were bound and 00,50% neutrophils were observed as the segmented form. (chart1)

**Cytochemical findings:**

**Gram staining:**
Neutrophils were seen with the staining core and high
DISCUSSION

As there is a statistical correlation between the expected degree of histological changes and changes to the epithelium cells, this will be visible the existence of squamous epithelial damage from low to high with the clinical signs and make such dire consequences such as Metaplasia, Hyperplasia, Paraplasia and also creating a tumor and or cancer, does not have a significant outbreaks and this situation has been reduced strongly in treatment and recovery or removal of the infective agent with the increasing age.

(Z: -2.521, Sig: 0.012)

According to the above-mentioned infectious agents in every age, it is considerable that the presence of active neutrophils statistically with segmented core will always be seen and despite of inflammatory cell response, acute and non-specific type, treatable and then have more outbreaks of follicular cervicitis. The presence of bound neutrophils has been raised with age increasing, but the presence of the segmented neutrophils has been reduced with increasing age.

(Z: -2.134, Sig: 0.033)

Neutrophils activity pursuant to the performance of the effect of eosinophils, in particular natural eosinophils, showed that response of inflammation, acute cellular with unique cell populations did not occur and the eosinophils mucosa involvement a decisive role in the development and success of the immune response. The population of eosinophils participating in a process has been reduced with age increasing, but the hyper-granulated eosinophils will be reduced with increasing age, that could have been shown the decisive role of the contents of eosinophilic granules in inflammation and cervicovaginal activity to be against infectious agents.

(Z: -2.046, Sig: 0.041)

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