Success of Endoscopy with Narrow Band Imaging in Diagnosis of Cervical Metaplasia

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Introduction

Cervical metaplasia

Metaplasia defined as a transformation from one mature cell type to a second mature. Cervical metaplasia has always generated major interest because of its neoplastic potential [1]. Metaplasia begins the movement of the original squamocolumnar junction onto the portion, usually as a result of estrogen production or interval vaginal deliveries. The exposure of the delicate columnar cells to an acidic bacteria laden vaginal environment initiates the process of inflammation and replacement with stratified squamous cell [1,2].

At birth there is an abrupt junction between the squamous epithelium of the ectocervix [the original squamous epithelium] and the columnar epithelium of the endocervix. Through exposure to estrogen [at birth, during puberty, and throughout reproductive life], the glycogen in the exfoliated cells of the vagina is converted into lactic acid, accounting for the acidity of the vaginal secretions [pH<4.5]. This acidity, along with other factors, stimulates the replacement of the columnar epithelium with squamous epithelium. This process is known as metaplasia [3]. Metaplasia results in the formation of a new SC]. The area between the original SC] and the new SC] is known as the transformation zone. Metaplastic changes usually start from the periphery of the ectropion and spread towards the external os. Changes can also occur in discrete patches on the columnar epithelium. The new squamous cells originate from the totipotent “reserve” cells that remain dormant beneath the columnar cells.squamous metaplasia can divided into three stages [4].

The common procedure has been traditional for uterine cervical cancer is the Pap smear followed by colposcopy [5]. Flexible magnifying endoscopy is at present time used for the gastrointestinal tract and is tolerable for the diagnosis of GI...
Magnifying endoscopy with narrow band imaging can be used to clearly imagine the microstructures of the mucosal surface and interstitial capillaries [6,7].

As regard of used of flexible endoscopy in examination cervix lesion. The first was studied by Nishiyama et al was reported the used of endoscopy for diagnosing cervical neoplasms revealed micro-vascular pattern differences at different stages [9]. The second study of K Uchita et al study feature findings of high-grade cervical intraepithelial neoplasia or more on magnifying endoscopy with narrow band imaging. So, it is anticipated to be useful for diagnosing metaplsia. This study aimed to identify characteristic findings of metaplsia visualized using flexible endoscopy and confirmed by the cytology result.

**Methods**

20 women were undergoing vaginal smear and at the same time Flexible endoscopy was performed. After written consent was obtained from all patient's vaginal examination were done follow by using a Cusco speculum to examine the cervix by endoscopy using white light imaging and narrow band image at long, middle, and short distances. Video and picture taken and reviewed based on the known characterized finding of metaplasia and confirmed by cytology examination.
Figure 3: Study antamoy of labia vagina.

Figure 4: Squamous column Junction.
Figure 5: At different positions way from endocervix Midway.

Figure 6: Column cells.

Figure 7: Mature squamous cells

Figure 8: Immature squamous cells.
Results and Discussion

Cervical metaplasia is natural process but as transformation zone is liable to human papilloma

Virus infection and dysplasia can occur and may proceed to cancer for that point it take important of early diagnosis of metaplasia for not to be mistaken from dysplasia and also we try to find an accurate method of diagnosis of metaplasia two study were done on flexible endoscopy with narrow band image for study of evaluation of cervical cancer.

Advantages of flexible endoscopy are high magnification ability and increase the degree of image clarity succeed to obtain clear images of any location of cervix by manual movement of endoscopy and facilitate vision of both surface and vascular structures without use of acetic acetic or lugo’s iodin. the first study of flexible endoscopy was done by Nishiyama et al. for diagnosis of cervical neoplasms show micro-vascular pattern distinguished at different stages [10], other study by K Uchita who was focused not only on vascular pattern but also on epithelium thickness in our study focused on vascularity and thickness of epithelium and change in shape of cells and nuclear density in addition to that known pictures of diagnostics futures of metaplasia that found in all cases.

In summary, endoscopy demonstrated characters of the metaplasia clearer and the magnification. Power adds to that access to all around the cervix and endocervical channel and assessment of blood vessels by narrow band by blue band and green band as we met of cells shape nuclear density Thickness of epithelium.

References