



## AUDIT ON MANAGEMENT OF CERVICAL GLANDULAR INTRAEPITHELIAL NEOPLASIA

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### ABSTRACT

The aims of this study were to review the diagnostic pathway and management of women referred with abnormal smears reported as 'glandular neoplasia'; to assess the correlation of cytological and histological diagnosis and to assess the outcomes after referral to colposcopy following a LBC showing abnormal glandular cells and the compliance with NHSCSP guideline. Retrospective review of cervical glandular intraepithelial neoplasia over a 5 year period from 2009 to 2013 has been presented. . Total of 45 women with abnormal glandular smears were identified during this period from the Caledonian Colposcopy database at the Royal Derby Hospital. A retrospective review of the case notes was carried out to collect demographic information, referral interval to colposcopy clinic and details of colposcopic findings and treatment procedure carried out along with histopathological findings including information relating to excision margins, final diagnosis and subsequent follow up and cytology results. About half of the women with abnormal glandular cells (48%) were in age group of 25-35 years at the time of referral. (Mean age 36.3). 15 % of women with abnormal glandular cells were nulliparous. Majority of referred smears are abnormal glandular cells. 41 women with abnormal glandular smear were seen in colposcopy clinic within 2 weeks of referral (91% Compliance). 95% of women had excisional treatment at their first visit (95% Compliance). 71 % women had complete excision with disease free margins. 4% of women needed repeat excision and out of those 4 %, 17 % needed hysterectomy. Histology showed 22 % of women had invasive carcinoma, 13 % had concomitant CIN and 20% had CIN alone. Out of 45 cases, 27% of women needed hysterectomy and more than half of the women needed radical hysterectomy. 1 woman needed chemoradiation due to the advanced disease at the time of diagnosis. No recurrence case was noted during study period. Immediate referral for colposcopy and detailed assessment by experienced colposcopy team is recommended.

**Keywords:** Cervical glandular intraepithelial neoplasia, abnormal glandular smears, Caledonian Colposcopy database, colposcopy, histopathology, cervical cytology

### INTRODUCTION

There is strong circumstantial evidence that high grade cervical glandular intraepithelial neoplasia (HG CGIN) is a strong precursor of invasive adenocarcinoma of the cervix<sup>1-6</sup>. However, detection of glandular abnormalities on LBC as marker of CGIN is considered more difficult than the detection of changes in

squamous cells which is the precursor for CIN. Cytological diagnosis of glandular abnormality is generally agreed to be less precise than for squamous cell precursors.

The aims of this study were to review the diagnostic pathway and management of women referred with abnormal glandular smear, to assess the correlation of cytological and histological diagnosis of women with abnormal glandular smear and to assess the outcomes after referral to colposcopy following a LBC showing abnormal glandular cells and the compliance with NHSCSP guideline.

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**MATERIALS AD METHODS**

Study design included retrospective review of case notes for a total 5 years period from 2009 to 20013. A total of 45 women with abnormal glandular smears were identified during this period from the Caledonian Colposcopy database at the Royal Derby hospital. A retrospective review of the case notes was carried out to collect information on the demographics and colposcopy visit details, referral time to colposcopy clinic and treatment procedure were carried out. Histological findings including information relating to excision margins, final diagnosis and follow up cytology results were collected and analysed using an audit proforma.

**RESULTS**

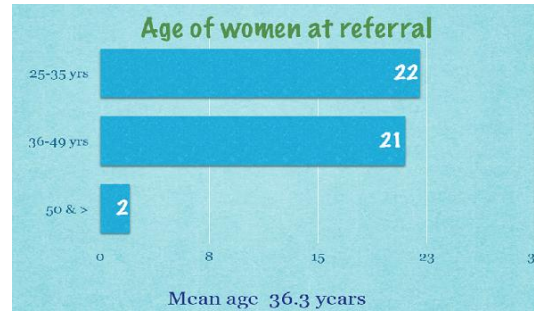
About half of the women with abnormal glandular cells (48%) were in age group of 25-35 years at the time of referral (Mean age 36.3, fig.1). 15 % of women with abnormal glandular cells were nulliparous (fig.2). Ninety one percent of women with abnormal glandular smear were seen in the colposcopy clinic within 2 weeks showing compliance to the national standard (fig. 3). 95% of women had excisional treatment at their first visit (fig. 4). All women with abnormal glandular smear had colposcopic assessment showing 100% compliance. Majority of referred smears are abnormal glandular cells (fig.5).

71.4% women had complete excision with disease free margins (fig.6). 4% of women needed repeat excision (fig. 7). Histology showed 22% of women had invasive adenocarcinoma, 13% had concomitant CIN, 20% had CIN alone, and 42% had CGIN (fig. 8). Out of 45 cases, 24% of women (11) had hysterectomy and more than half of the women had radical hysterectomy. One patient was treated with chemoradiation due to the advanced disease at the time of referral (fig. 9). Histological results of the hysterectomy patients were as shown in the figure 10. No recurrence of abnormal cytology was noted during study period.

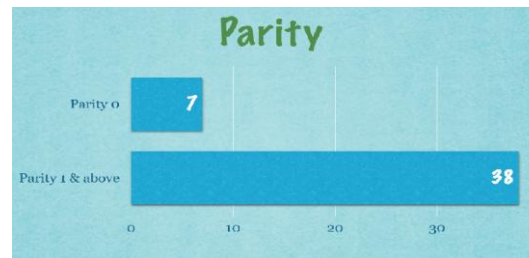
**DISCUSSION**

The incidence ratio of CGIN: CIN is 1:50. Glandular dyskaryosis accounts for 0.5-0.8 per

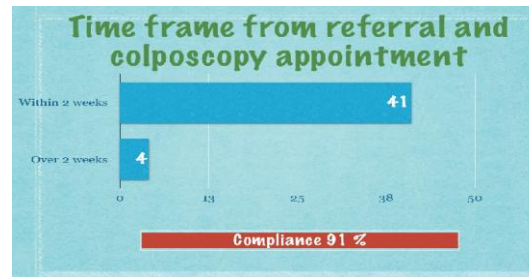
**Fig.1. Age at referral**



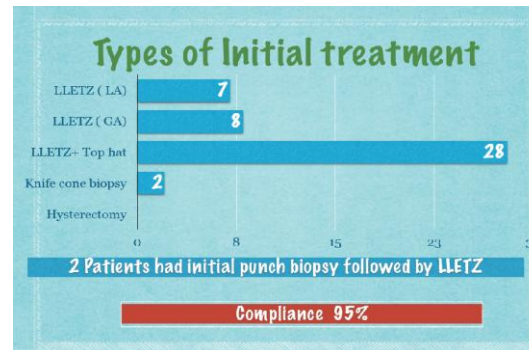
**Fig. 2. Parity**



**Fig. 3 Time interval between referral and colposcopy**

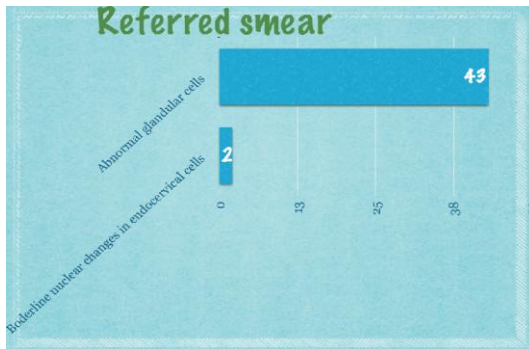


**Fig. 4. Type of initial treatment**



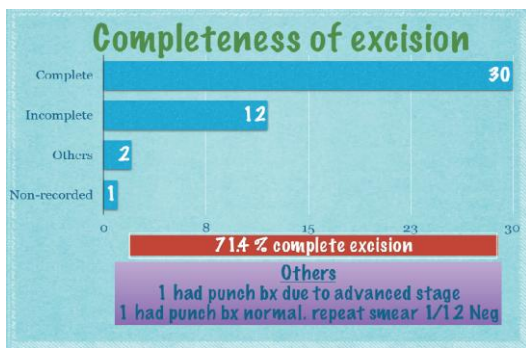
1000 smears (1 in 2000). Urgent referral for colposcopy is required within 2 weeks period following abnormal glandular smear results. Possible differential diagnosis includes HG CGIN,

Fig. 5. Nature of abnormal glandular smears



adenocarcinoma, endometrial carcinoma, extra uterine adenocarcinoma (e.g. ovarian adenocarcinoma), etc. Non-specific colposcopic indicators for glandular abnormality as colposcopy lack sensitivity for diagnosis of glandular lesions with a PPV 17-96% for premalignant & malignant lesions.

Fig. 6. Extent and completeness of excision

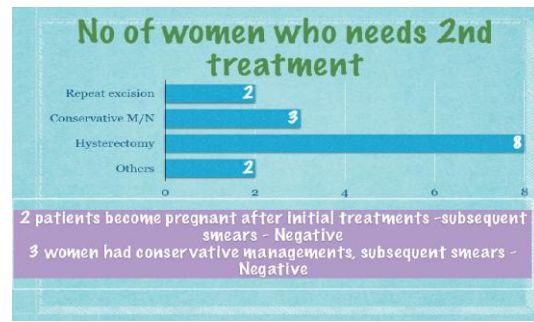


There is higher prevalence of invasive adenocarcinoma, CGIN, CIN in this population with concomitant CIN in 50% of cases. Punch biopsy has, therefore, no role in their precise diagnosis. Excisional biopsy including cervical canal is required to detect HG CGIN and invasive adenocarcinoma. Cylindrical shaped cervical excisional biopsy including whole transition zone (younger women when squamous cell junction (SCJ) visible- 1 cm above endocervical canal, older women when SCJ not visible, 20-20 mm above endocervical canal) should be the norm in such cases.

Colposcopic assessment is essential in the presence of cytological glandular abnormality.

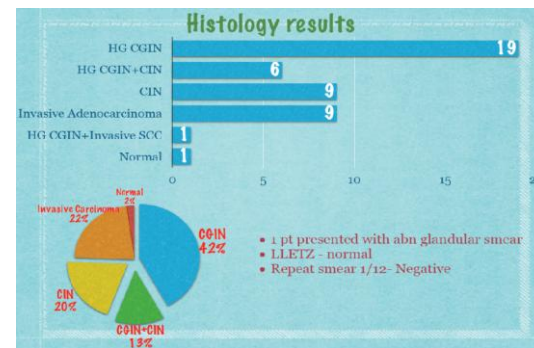
Women with samples reported as glandular neoplasia should be referred for investigation urgently within two weeks for colposcopy to

Fig. 7 Need for further treatment



exclude significant cervical and endometrial neoplasia. Women should be referred for colposcopy after one test reported as borderline nuclear change in endocervical cells. At least 90% of women should be seen a colposcopy clinic within 8 weeks of referral.

Fig. 8 Histological findings



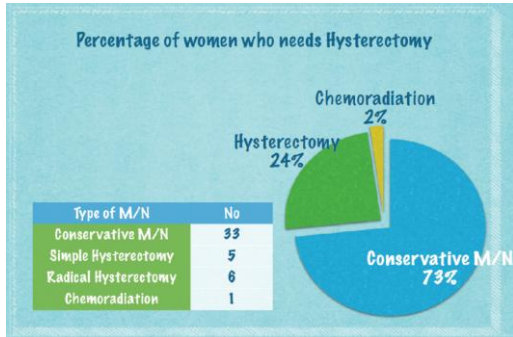
Women with adenocarcinoma in situ or CGIN can be managed by local excision for those wishing to retain fertility. Incomplete excision at the lateral or deep margins requires a further excision procedure to obtain clear margins and exclude occult invasive disease.

To maintain the requirements of national guidance that 90% of referrals with glandular abnormalities needs to be seen in colposcopy within 2 weeks. Initial treatment should aim to get cylindrical shape excisional biopsy including whole TZ with disease free margins based on the account of referral smear, age of the patient, parity, fertility wish and colposcopic findings.

Possibilities of other genital tract glandular abnormalities should also be considered. It is important however to accept that a proportion of patients will require repeat excision and this compromise rather than excessive treatment in nulliparous patients and patients desirous of

fertility. Any cases with discrepancy of smear and biopsy result should be discussed in MDT meeting. A re-audit in a few years would be useful as the follow up of patients treated for CGIN has changed since May 2014.

**Fig. 9 Type of treatment**



**Fig. 10 Histology in hysterectomy patients**

Histology Results of Hysterectomy	
Histology	Number
No residual	5
Residual Adenocarcinoma	3
HG CGIN	1
Adenomyosis	2

To keep the good practice of seeing majority of women (90%) in colposcopy clinic within 2 weeks of referral and should aim to improve the compliance of 100%. To keep up with the good

percentage of women with complete excision (71%) and aim to reduce the percentage of women with incomplete excision. Health education to all the general practitioners that cervical smear has no role in patients with frank cervical cancer. If clinically suspected, women should be referred immediately without wasting the time for smear.

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