

# Cervical Microglandular Hyperplasia in a Case with High-risk HPV: A Case Study

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## Background

- Cervical microglandular hyperplasia (MGH) is a benign lesion of the cervix that can be misdiagnosed as cervical adenocarcinoma.
- Its diagnosis has been challenging to both gynecologists and histopathologists and was previously linked to hormonal exposure.
- Its relationship with the human papilloma virus (HPV) has not been well investigated.

## Case

- A young primiparous woman presented with vaginal discharge. On examination, a cervical lesion highly suspicious of malignancy was identified. An HPV PCR test was positive for two high-risk HPV genotypes with negative cytology.
- The colposcopy showed an irregular papillary cervical mass extending into the endocervix that bled on touch. Multiple biopsies were obtained, and the histopathology examination confirmed MGH diagnosis.
- The patient was followed up with regular HPV testing and colposcopic procedures. In six months, the cervical lesion has regressed, and the HPV and cytology were negative.

|                        | Feature           | MGH                                                                          | Cervical adenocarcinoma                                                   |
|------------------------|-------------------|------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Macroscopic appearance | Gross appearance  | Erosion-like lesion or polyp, or papillary exophytic mass                    | Papillary exophytic mass                                                  |
|                        | Bleeding on touch | Present                                                                      | Present                                                                   |
|                        | Location          | Arise intracervical or filling the endocervical canal                        | Arise intracervical or filling the endocervical canal                     |
| Microscopic appearance | Glands            | irregular glands lined by normal columnar or cuboidal mucin-containing cells | proliferations of glands, lined by multilayers of atypical columnar cells |
|                        | Mucin production  | Present                                                                      | Present                                                                   |
|                        | Hypercellularity  | Absent                                                                       | Present                                                                   |
|                        | Solid growth      | Unusual                                                                      | Present                                                                   |
|                        | Signet-ring cells | Unusual                                                                      | Can be found                                                              |
|                        | Chromatin content | Normal                                                                       | Hyperchromatic                                                            |
|                        | Mitotic activity  | Rare to absent                                                               | Present                                                                   |
|                        | Nuclear atypia    | Rare to absent                                                               | Present                                                                   |
|                        | Invasion          | No invasion                                                                  | Can be present according to the stage                                     |
|                        | Neutrophils       | Present                                                                      | Present                                                                   |

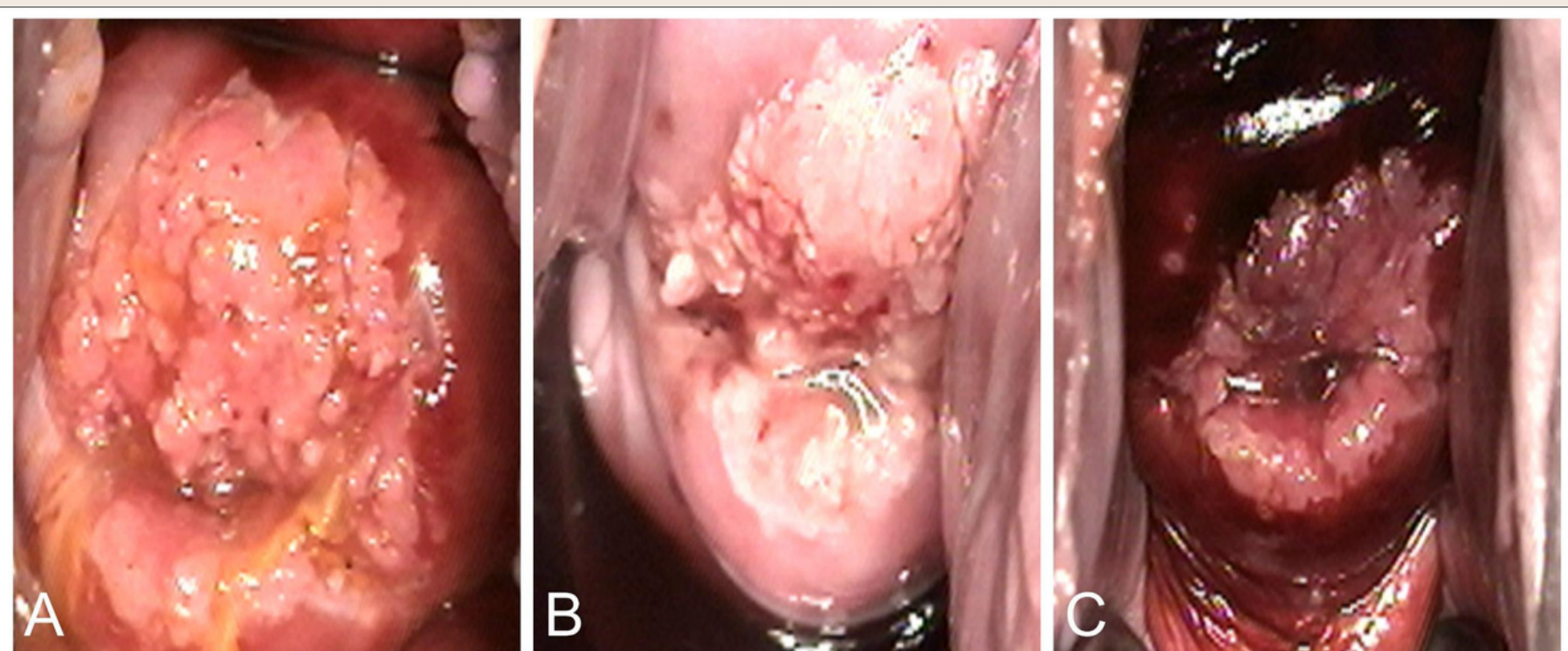


Figure 1: Colposcopic images of the cervical lesion (X3) at the initial examination: A) without staining, B) after acetic acid 5% application, C) after Lugol's iodine application (C)

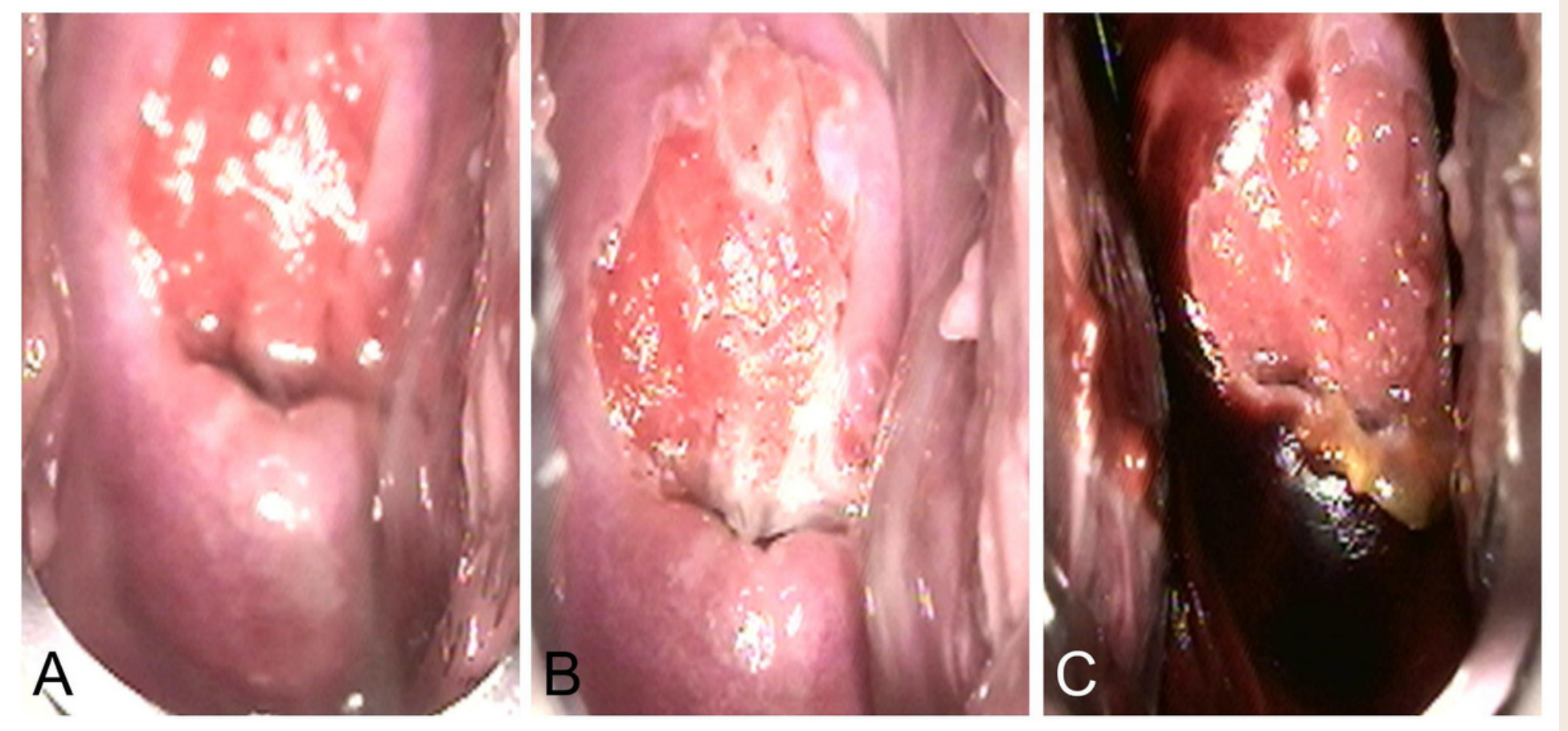


Figure 2: Colposcopic images (X3) at 7 months of follow-up showing the regressed cervical lesion before staining (A), after acetic acid application (B), after Lugol's iodine application (C)

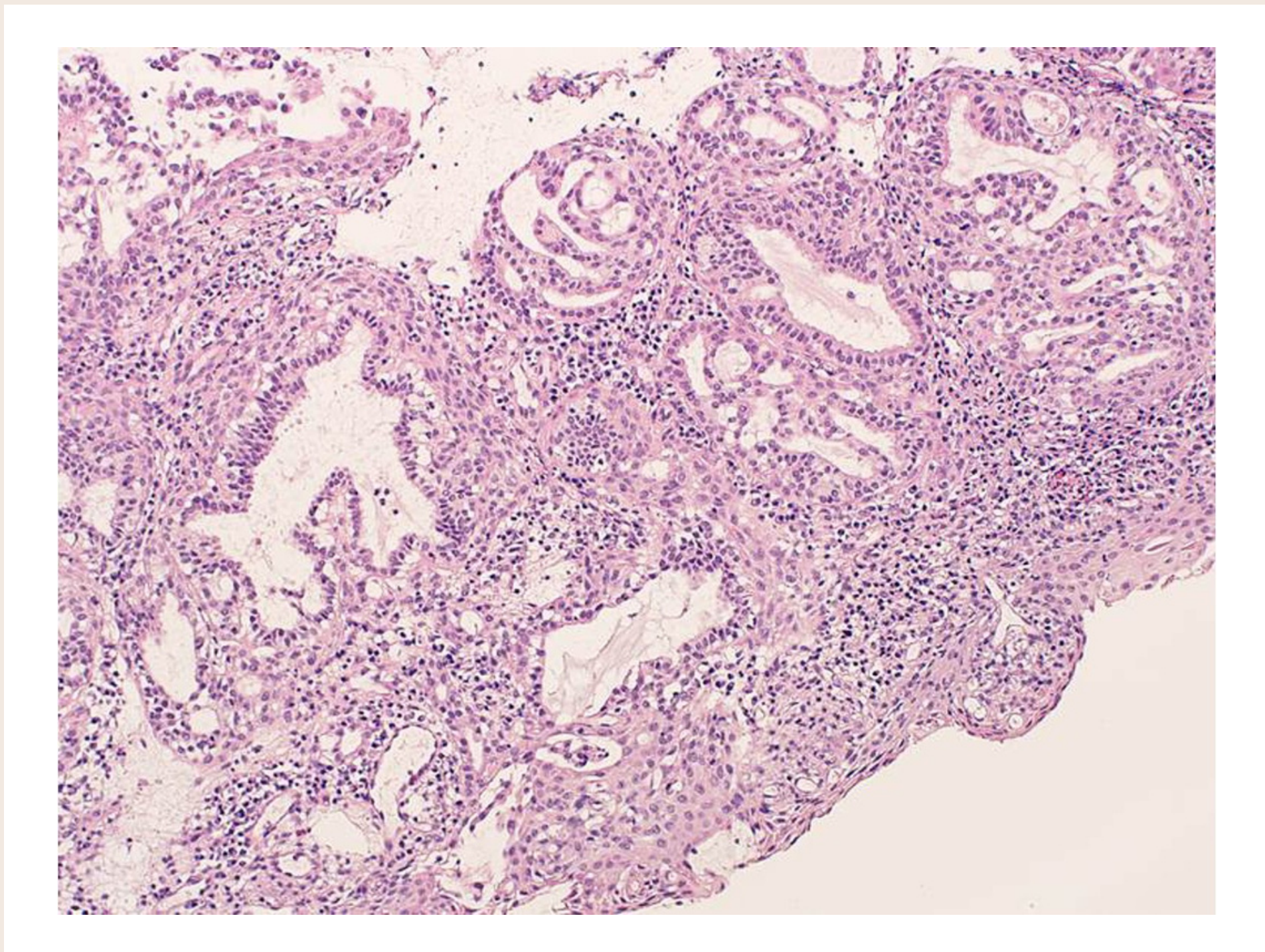


Figure 3: Microscopic findings of the cervical biopsy: Glands are with bland cytology with typical fenestration, adjacent squamous metaplasia and surface erosion.

## Conclusion

- MGH can be easily confused with cervical cancer due to their resemblance in presentation, macroscopic and microscopic appearance, which leads to the misdiagnosis of MGH as cervical cancer.
- There are still some minor differences between the two of them manifested in their glandular structure, cellularity, chromatin content, mitotic activity, nuclear atypia, biological markers, and other factors.
- Knowing these differences will help reduce the incidence of misdiagnosing MGH.

## Acknowledgement

We would like to thank the patient for their cooperation and consent