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Case Report

Pathogenesis of corpora amylacea (CA) in endometrium and cervix of a patient with uterine leiomyoma and adenomyosis: A case report

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Abstract

Corpora amylacea (CA) appeared to be an eosinophilic, acellular round laminated structure. Present case was a 40-year-old patient who presented with menorrhagia. The patient was operated and hysterectomy was done. Histopathological examination revealed presence of a submucous leiomyoma, measuring 5×4×4cm. In addition, the uterus showed adenomyosis and several round structures, suggestive of corpora amylacea.

Keywords: *Pathogenesis, Carpora amylacea, Ageing, wasteosomes.*

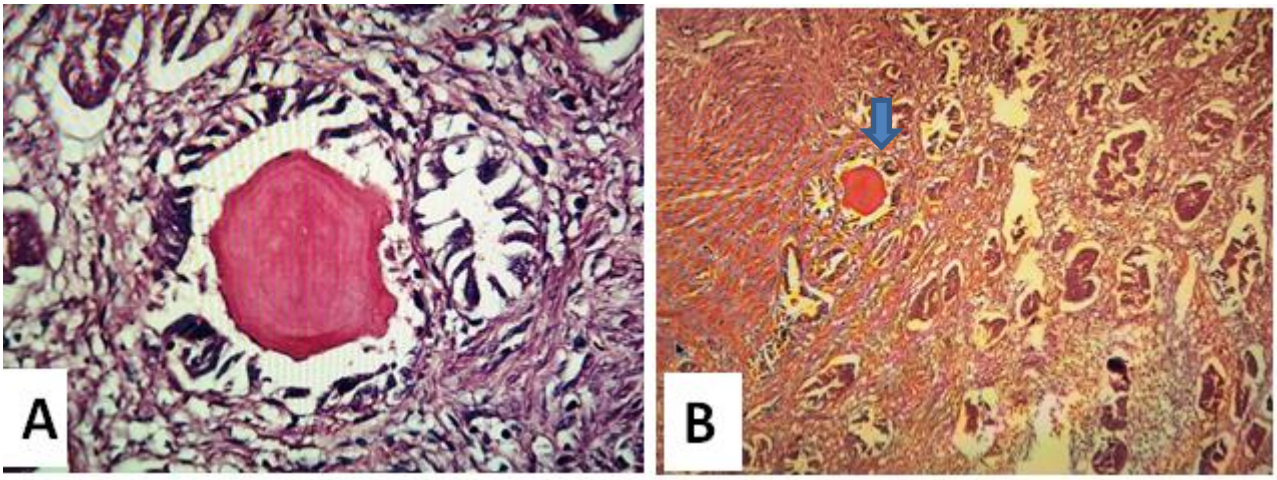
Introduction

Corpora amylacea (CA) was first described by Friedreich in the year 1856[1]. CA was an eosinophilic, acellular, round and laminated structure with unknown significance [2]. CA might contain amyloid fibrils and might be present in glandular lumen [3]. CA amyloid appeared to be Potassium permanganate sensitive and tryptophan positive. Further, CA amyloid might be different from most of the amyloids except for AA and β2 microglobulin amyloid. It was proposed to be called Ad-52C according to the guidelines of amyloid nomenclature [3]. However, uterine CA were not stained by any of the following antibodies AA,Aβ2M, Aλ, Ak and ATTR, suggesting CA of uterus is different from other CAs from lung and prostate[4]. Herewith, we

report a case of corpora amylacea in endometrium and cervix of a hysterectomy specimen.

Case Report

A 40-year-old patient presented with pain in lower abdomen in pelvic region. Hysterectomy was done. Histopathological examination revealed presence of a submucous leiomyoma. It measured 5×4×4 cms and displaced endometrial cavity. In addition, several corpora amylacea (CA) were seen in the endometrium and cervix. Moreover, uterus of the current case also showed features of adenomyosis.



(A) Photomicrograph showed corpora amylacea (CA) body. CA body was irregular round amorphous structure ~ 400µm in diameter. CA body was seen in endometrium. It also showed concentric rings (H&E ×400).
(B) Photomicrograph showed CA body in cervical tissue. Arrow shows CA body ((H&E ×100).

Discussion

Though CA was discovered about two centuries earlier, yet its significance was not clearly known. However, corpora amylacea (CA) might be associated with ageing. CA was a round laminated structure and was amyloid-like in nature. Endometrial glands and stroma of myometrium had features suggestive of adenomyosis. CA was also seen in the present case. The present patient was 40-year-old. She complained of menorrhagia along with an ischiorectal tumour. She was operated and hysterectomy was done. The tumour was finally diagnosed as myxoid leiomyoma. Anti-desmin antibody failed to stain the tumour cells. Positive staining of tumour cells was seen with anti-EMA and anti-CD 34 antibodies. Present case gave a negative reaction with anti-desmin antibody. Desmin negativity of tumour cells was rare. However, it was known to occur in leiomyoma [5]. Endometrial glandular cells might engulph foreign waste substances and transfer them in glycan structures. Later, glycans were released in stroma where these structures were phagocytosed by monocyte macrophages [6]. Moreover, anti- amyloid (þ) antibody did not stain the CA. Surprisingly; CA was detected in atrophic endometrial glands without any relation with amyloid (p) syndrome [4]. CA was also detected in cervicovaginal smears without any known significance[7]. Moreover, CA was also detected in other 15 cases; all were aged>84 years, suggesting possible role of ageing in pathogenesis of CA. Local ca^{++} concentration and niduses might also be involved [4]. Further, it was proposed to rename the corpora amylacea as *wasteosomes* because CA entrapped waste products [6].

Conclusion (S)

Present study relates to detection of corpora amylacea (CA) in endometrium of a patient. The patient was aged 40 years. She complained of pain in lower abdomen. CA was laminated structures with fibrils. Present patient also has a submucous leiomyoma. Local calcium concentration and

niduses might be involved in pathogenesis of CA. In addition, uterine and/or cervical CA might not be related with amyloid.

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