



STUDY THE PREVALENCE AND PATHOLOGY OF UTERINE LESIONS IN EWES IN BAGHDAD, IRAQ

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ABSTRACT

This study was designed to identify the prevalence and pathological lesions in Ewes uteri in Baghdad, Iraq. The uterine lesions were recorded in 43% of total examined specimens (200) and different pathological inflammatory lesions were recorded.

1. Chronic non suppurative endometritis were present in 25.6 % of total uterine lesions
2. Acute non suppurative endometritis were present in 18.6%
3. Suppurative endometritis were present in 8.1%
4. Non suppurative metritis were present in 7 %
5. Suppurative metritis and pyometra were present in 11.6 %
6. Perimetritis were present in 18.6%
7. Uterine tumor lesions, benign fibroma and adenomatosis were present in 10.5% of total uterine lesions.

Conclusion: chronic non suppurative endometritis was the most common uterine lesions than other types of uterine lesions.

KEYWORDS: Ewes uterine lesions, prevalence and types.

INTRODUCTION

uterine lesions were most common in ewes and other domestic animals^[1] it caused by different agents (microbial, mechanical, chemical and physicals).^[1] the prevalence rate of endometritis were varied in ewes in different parts of the world, in Netherland 7%^[2], in Australia 24%.^[3] In Iraq (96 %) and different types of uterine lesions were recorded, acute, subacute and chronic endometritis.^[4] other workers^[5] reported septic metritis and considered it is fatal disease so called fatal metritis. suppurative and nonsuppurative, myometritis and perimetritis also were recorded^[6] depending on type of exudates and duration of inflammation, other uterine lesions such as fibroma and adenomyosis a benign tumor lesions were also recorded in ewes uteri^[1] Due to importance of these uterine lesions, the present study was aimed to identify the prevalence and type of uterine lesions in ewes in Baghdad, Iraq.

Materials and Methods

Two hundred uterine specimens were collected from 4 abattoirs in Baghdad city, Iraq. The ages of ewes were 1-

4 years. All the uteri were opened and recorded all the gross lesions and small pieces (0.5 -1 cm) were kept in neutral buffered formalin for fixation, processed routinely, cut at 5 microne section and stained with hematoxyline and eosin for light microscope examination.^[6]

THE RESULTS

1. Gross lesions were present in 21% of uterine lesions, it consisted from mucous secretions, edema, congestion, pus. and uterine adhesion and benign tumor lesions. Other lesions were subclinically, detected microscopically (22%) of uterine lesions and the total ratio of uterine lesions were 43% histologically detected.

2. Microscopic lesions

1. Suppurative endometritis

Were present in 8.1% of uterine lesions composed of infiltration of the neutrophils mainly with few mononuclear cells (lympholytes, macrophages and plasma cells) in the endometrial epithelial layer and in

their stroma together with congestion and edema. Some degenerative changes were seen in endometrial epith. (Fig 1)

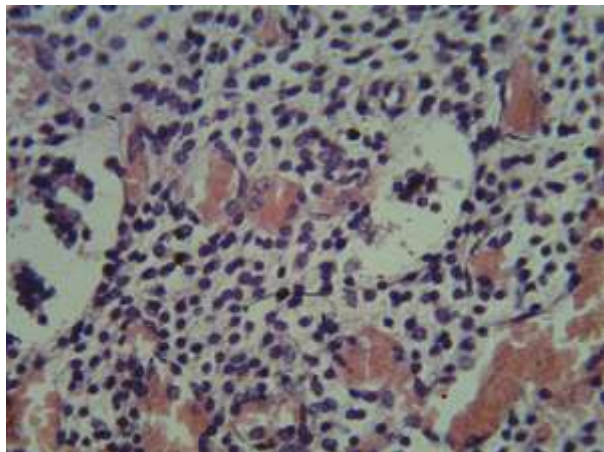


Fig 1: Uterus of EWE acute suppurative endometritis.

2. Acute non suppurative endometritis

It was present in 18.6% of the uterine lesion. It consisted of mononuclear cells infiltration with few neutrophils in the endometrial epithelia and their stroma. Also there was congestion and microthrombi were seen in the blood vessels together with edema and degeneration of endometrial epith. (Fig 2)

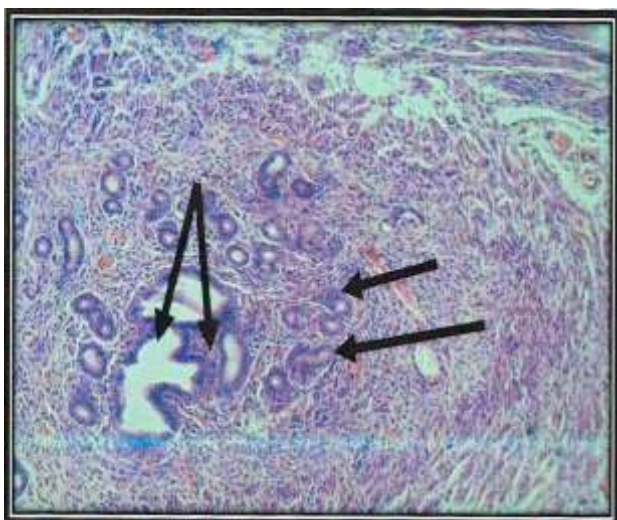


Fig 2: Uterus of EWE Acute non suppurative endometritis.

3. Chronic non suppurative endometritis

It was present in 25.6 % of uterine lesions, it consisted of infiltrations of mononuclear cells in endometrial layer and their stroma together with extensive fibrosis of endometrial stroma causing cystic dilation of endometrial glands, irregularity and atrophy of some endometrial glands. (Fig 3)

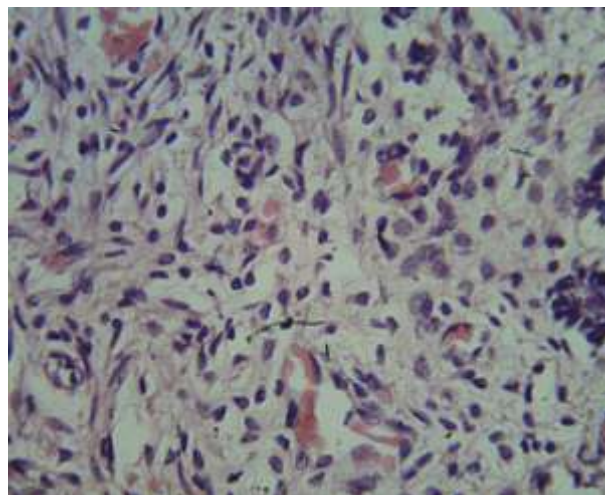


Fig 3: Uterus of EWE Chronic non suppurative endometritis.

4. Suppurative metritis and pyometra

It was present in 11.6% of the uterine lesions, it consisted of huge amount of neutrophils infiltration together with necrotic tissue debris, replacing the myometrium and in certain cases reach into endometrial layer. mAlso cystic dilation of endometrial glands and extensive congestion. (Fig 4)

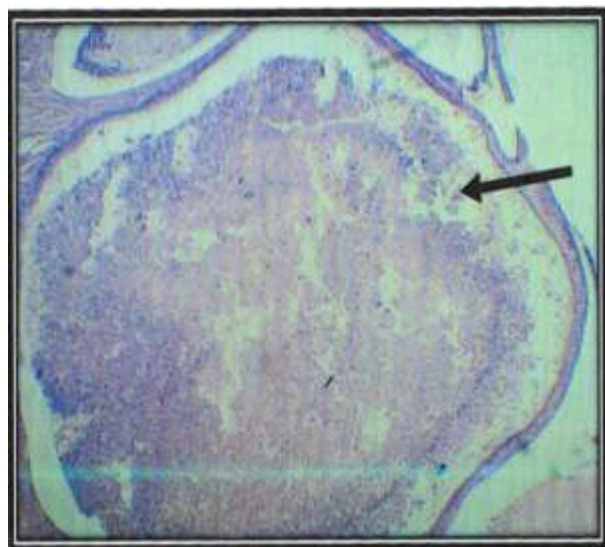


Fig 4: Uterus of EWE with suppurative metritis and extensive pyometra.

5. Non suppurative metritis

It was present in 7% of the uterine lesions, consisted of infiltration of mononuclear cells with some neutrophils in the myometrium together with congestion and microthrombi in the myometrium blood vessels. (Fig 5)

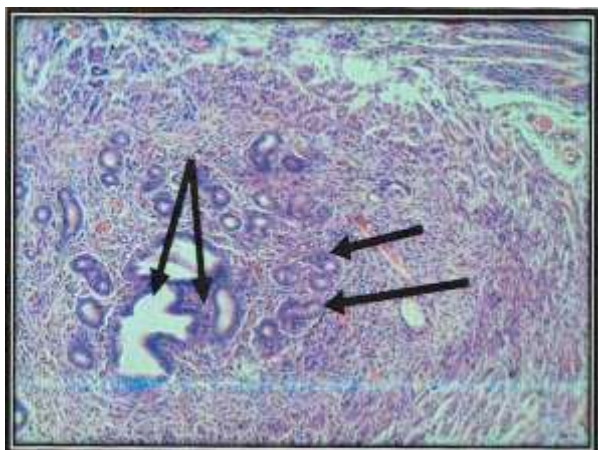


Fig 5: Uterus of EWE with non suppurative metritis.

6. Perimetritis

It was present in 18.6% of uterine lesions, it consisted from mononuclear and neutrophils infiltration together with extensive fibroblasts proliferation in the serosal layer of uterus causing uterine adhesions with adjacent organ. (Fig 6)

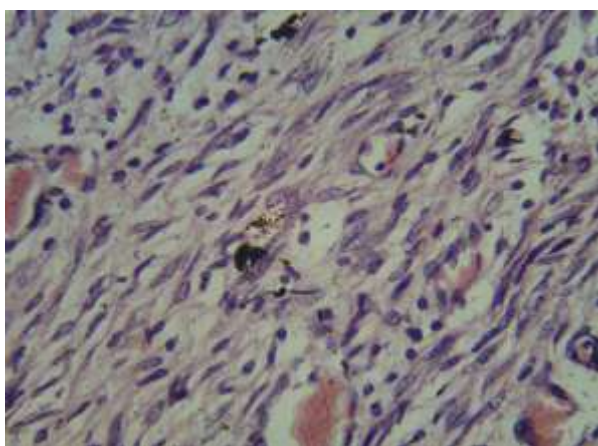
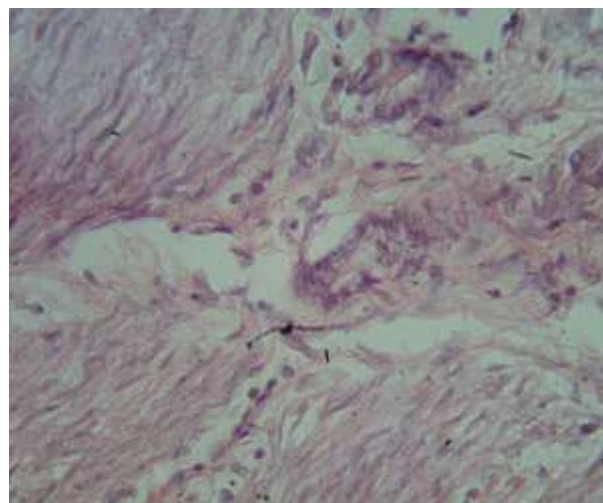


Fig 6: Uterus of EWE should infiltration of mononuclear cells in the serosal layer of uterus.

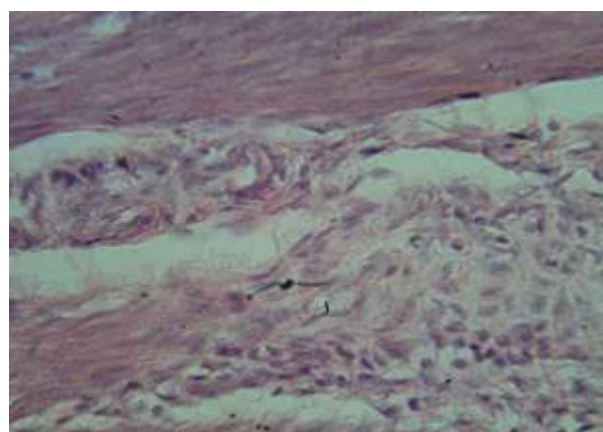
7. Uterine benign tumors

It was present in 10.5 % of uterine lesions, it was consisted of extensive fibroblasts proliferation giving whorly pattern appearance of fibroma involving the myometrium and uterine serosa, in certain cases fibroma was accompanied with some aggregations of mononuclear cells in between muscle fibers of

myometrium and uterine serosa. other benign tumor lesions were adenomatosis which consisted of presence and proliferation of endometrial glands and their stroma in between muscle fibers of myometrium, causing nodular thickening of uterine wall a similar feature found in fibroma. (Fig 7-8)



(Fig 7): Uterus of EWE should whorly pattern fibroma.



(Fig 8): Uterus of EWE should adenomatosis, presence and proliferation of endometrial glands and their stroma in between muscle fibers of myometrium.

Table 1: Number and ratio of uterine lesions in ewes.

Types of uterine lesions	Number of uterine lesions	Ratio % of uterine lesions (86)	Ratio % of total uteri (200)
Suppurative endometritis	7	8.1	3.5
Acute non suppurative endometritis	16	18.6	8
Chronic non suppurative endometritis	22	25.6	11
Suppurative metritis (pyometra)	10	11.6	5
Nonsuppurative metritis	6	7.0	3
Perimetritis	16	18.6	8
Uterine benign tumors	9	10.5	4.5
Total	86	100	43

THE DISCUSSION

This study revealed that the prevalence rate of uterine lesions were 43% (86 out of 200 cases) detected microscopically. This ratio was varied from other studies in the different parts of the world. This variation is belonged to the number of uterine lesions were subclinically without gross lesions and detected microscopically^[3,7] for this reason gross lesions were detected in 21% of uterine lesions, whereas, subclinical lesions were 22% of uterine lesions and the whole lesions detected microscopically were 43%. Most of chronic uterine lesions were accompanied by squamous metoplasia and cystic dilation of endometrial gland epithelia. A similar findings reported by^[1,8] that these lesions occurred in ewes feeding containing estrogenic compounds (sweat clover), also cystic dilation of endometrial glands occurred in association with myometrial fibers prolapsed together with fibrosis of the endometrial stroma which impair the secretion of the glands and become cystic which were evident in this study and in other studies^[9]. The most common uterine lesions were acute and chronic endometitis (52.3%) of uterine lesions, other workers^[2] reported it in 7% and 24%^[3], this variation depend on number of examined uterine cases, nature of feeding and weather and geographic area in any country and management. Endometritis is associated with gynecological abnormalities reflected by abnormal sanitary condition during parturition and bad management of ewes lead to sterility and uterine lesions^[5] whom reported that during early life of fetuses must be grow in clean uterine conditions without microbial contamination, especially chronic fibrotic uterine lesions which are predominant in this study is associated with sterility and inability of uterus to maintain the fetus^[10].

Chronic non suppurative endometritis were present in 25.6 % of uterine lesions, also these ratio were varried from other ratio in other studies this variation is belonged to the microbial contamination, bad management, nature of weather and the number of examined uterine lesions^[5], This type of endometritis is associated with reduction of endometrial glands secretion together with fibrosis of endometrial stroma inhibit the fertilization and maintaining of fetus life in uterus.

Chronic suppurative and nonsuppurative metritis were present in 11.6% and 7% respectively of uterine lesions comparable to low ratio reported by^[7,8], this variation is belonged to that microbial infection (pyogenic bacteria) invaded the uterine wall through hematogenous route of infection or infection extended from endometrium as in cases of suppurative endometritis or even. infection extended from the adjacent tissue periton and cause septic metritis which is fatal^[1], some cases of septic metritis may accompanied with suppurative endometritis, So endometrial damage and sterility due to pus and pyometra occurred in these cases of uterine lesions. some cases of endometritis were localized without gross lesions i.e sub clinically occurred by mild bacterial

infection through parturition or even at anestrus phase^[11] where there is low level of estrogen predispose uterus for infection without clinical signs which is evident in this study comparable to suppurative and non suppurative uterine lesions.

Perimetritis were present in 18.6% of uterine lesions, this serosal affection by microbial agent occurred following either hematogenous route or infection passed from adjacent organs such as periton for this reason the perimetritis ratio were low comparable to metritis and endometritis lesions^[12] which occurred following parturition and bad management of ewes.

Tumor lesions were recorded in 10.5% of uterine disorders were benign fibroma, with fibroblastic proliferation involving the endometrial stroma and in between myometrial fibers giving nodular thickening of uterine wall, other benign tumor lesions were adenomatosis in which passing of endometrial gland and their stroma into myometrium and following implantation and proliferation of endometrial glands in myometrium causing nodular thickening of uterine wall, similarly in fibroma, both of these benign tumors occurred following endocrine and physiological abnormalities in the endometrium^[5] enhance the implantation of endometrial glands, some of these tumors may occurred following exposition of uterine tissues to different carcinogens.^[13]

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