ABSTRACT

Necropsy examination was performed on a 26-month-old adult primigravid female guinea pig (sow). Morbid changes in the ovaries include fluid filled, large cysts replacing a majority of the ovarian tissue. Microscopic evaluation showed that the ovaries were composed of multiple, variable sized follicular cysts lined by low columnar epithelium with marked compression and desquamation of the ovarian tissue, consistent with that of cystic ovaries. Uterus showed mild multifocal adenomatous hyperplastic changes in the endometrium.

Key words: Cystic ovaries, Guinea pigs.

CASE HISTORY

An adult primigravid sow (cavy), aged 26 months was brought for necropsy examination. Representative tissues were preserved in 10% formalin and after processing were sectioned at 5 μm and stained with haematoxylin and eosin for histopathological evaluation. History revealed that the animal was housed in stainless steel cages with ad libitum access to standard guinea pig pellet feed and water and maintained under stringent macro-environmental conditions of temperature (22°-26°C), relative humidity (55-60%) and light (12h:12h of alternating dark and light cycles). In addition, Hybrid Napier Co 3 grass and vitamin C (10mg/kg body weight) were supplemented with the regular diet. No prior hormonal therapy was administered to the sow.

No gross changes were noticed in other tissues except the reproductive tract. Both the ovaries contained multiple thin walled, fluid filled, fluctuant, large cysts each, measuring approximately 1.5 cm in diameter and replacing a majority of the ovarian...
tissue (Fig. 1). The cysts contained clear, watery fluid. Microscopic diagnosis showed that the ovaries were composed of multiple, follicular cysts of varying sizes lined by low columnar epithelium with marked compression and desquamation of the ovarian tissue, consistent with that of cystic ovaries (Fig. 2). Uterus showed mild multifocal adenomatous hyperplastic changes in the endometrium.

Macroscopical and microscopical characteristics of the ovaries agree with that of earlier reports (Percy and Barthold, 2007). Though bilateral cystic ovaries are a usual feature in older breeding sows, the etiology remains unclear under natural conditions. One possible reason that could be attributed is the role of exogenous estrogens in the diet (phytoestrogens). Paterson., (2006) implicated estrogenic substances in hay could be responsible for this condition. Kato et al., (2004) also opined that the estrogenic activity is high in guinea pig diet comprising soybean meal, fishmeal and various other ingredients. As unanimously described by various authors (Percy and Barthold, 2007; Paterson, 2006) cystic endometrial hyperplasia, mucometra and leiomyoma frequently accompanied ovarian cysts in cavies. However, in the present animal very mild pathological changes could be identified in the uterus. One reason could be that the ovaries were less active endocrionologically. Similar results were obtained from the studies of Szulańczyk-mencel and Bielas, (2008), who were unable to detect any significant changes in the reproductive tract in cystic ovaries of sows. Non-pruritic symmetrical alopecia as seen in most cases of cystic ovaries was not seen in this particular cavy. The results agree with Neilsen et al., (2003) who reported the occurrence of symmetrical alopecia only in two out of 43 cases examined. Further studies are required to relate the clinical alopecic and uterine changes with parity, age, number and size of cysts and to quantify such an association.

REFERENCES