SUMMARY

The present study was carried out on 150 clinically and healthy adult female (non pregnant) albino rat. The males were used to ensure the pregnancies.

The aim of the research is designed to give a scientific view of the possible role of the cabbage seeds on the fertility of the organs of the female genital system; the uterus and the ovary, as a cheap source of a new oral contraceptive growing in Egypt. To study the side effects of this substance, the liver was examined as it shares in many important metabolic processes.

Four doses of the crushed seeds were used to give an idea about the smallest dose that fulfils a reproductive functio with the least possible side effects. The animals were divided into five main groups (each of 30 animals) as following:

Group (1) : Comprised the control animals

Group (2) : Comprised the animals which received 4 g of the cabbage seeds / day / animal

Group (3) : Comprised the animals which received 2 g per day/ animal

Group (4) : Comprised the animals which received 1 g per day/ animal

Group (5) : Comprised the animals which received 0.5 g per day/ animal

Each of the main groups was sub divided into three sub-groups as follows:

Subgroup (a) : Animals fed for 15 days

Subgroup (b) : Animals fed for 10 days

Subgroup (c) : Animals fed for 5 days

Small pieces of the uterus, the ovary and the liver were prepared to get paraffin sections which were stained with haematoxylin and eosin, Masson's trichrome, periodic acid Schiff reaction, and methyl green pyronin and Feulgen reaction.

The results revealed that, in case of the ovary, the histological examinations illustrated that the higher doses showed more changes in the ovarian structures than the lower ones, at which there was an increase in the number of atretic follicles, number of copora lutea, and immature follicles especially after feeding on 4 g and 2 g during their own different periods. The collagenic fibres also increased in the ovarain stroma than in the control.

The periodic acid Schiff reaction was more intense than in the control especially in the follicular cells and the atretic follicles of animals receiving 4 g and 2 g. This reaction showed a less effect in the ovarain follicles and stroma of both 1g and 0.5 g.

In case of methyl green pyronin stain of the two higher doses (4 g and 2 g), the cytoplasmic RNA was regularily distributed throughout the cytoplasm of the follicular cell. It was intense in these doses but moderate in the ovary of 1 g and 0.5 g.

Feulgen reaction was strong in the nuclei of the follicles of the treated animals than the control. However, the lower doses showed a less effect on the nuclei than the higher ones.

The uterine feature of the treated groups differed from the control. All the four doses had an infertility effect and showed no pregnancy effects during the different periods of feeding. However, the higher ones

revealed more prominent changes in the histological and observation than the lower ones.

The endometrium was generally thin, although the arteries were prominent and highly coiled. The glandular epithelium showed traces of secretion especially in 4g and 2g fed animals, the endometrium was slightly thicker in case of 1 g and 0.5 g. Moreover, they caused an active proliferation in the subendometrial [functional] layer cells and the decidualization of endometrial stroma.

The collagenic fibres increased from the myometrium to the endometrium. The stroma were more condensed than the control in all the different treatd animals.

The PAS reaction was moderately increased than the control in both glandular endometrial epithelium. The same case was demonstrated by methyl green pyronin stain of the higher doses.

The Feulgen reaction showed more intensely stained nuclei in all the uterine structural epithelium. In case of the lower doses, there was a lesser effect of the uterine features than the higher ones.

In case of the liver, the results revealed that after the treatment with the crushed cabbage seeds, 1 g and 0.5 g the hepatocytes were actively increased in number and more proliferated than the control. The cytoplasm appeared darker. The collagenic fibres became slightly increased than the control especially around the larger central veins.

Meanwhile, the PAS reaction was more prominent in the hepatocytes cytoplasm throughout the different periods. The same results were observed in methyl green pyronin reaction.