

SUMMARY AND CONCLUSION

The uterine and ovarian growth during infancy and puberty are not completely understood. No standard data exists about the normal measures and morphologic appearance of the uterus and ovaries.

The aim of this work was to study the morphometry of the uterine and ovarian development in sonography of normal females aged 1-15 years and estimation the age of menarche.

This study was included 99 females between the ages of 1 to 15 years from Qalubia governorate. The study carried out at Benha University Hospital, Radiology Department. The subjects were divided into three groups. The age of first group ranged from 1 to < 6 years, the age of second group ranged from 6 to < 10 years. The age of third group ranged from 10 to 15 years.

These females were subjected for complete history, physical examination and transabdominal ultrasonographic examination included measurement of uterine (length, width, anteroposterior diameter and uterine volume), right and left ovarian volume.

The uterine and ovarian parameters were correlated with age, weight and height of the body of females in the studied groups.

The results of this study were:

- Significant gradual increase in uterine parameters and uterine volume with increase in age, weight and height of females.
- Significant gradual increase in ovarian volume with increase in age, weight and height of females.
- The ovarian growth rate was more progress in the third group than the first and second groups. Where the ovarian volume represented 63% of uterine volume in the third group.
- When the weight, height of females, uterine volume and ovarian volume were increased, the age of appearance of menarche became earlier.
- From regression equation, the uterine and ovarian volume could be calculated by using the age and height of females aged between 1-15 years.

Based on this study:

- Sonography provides a simple way to assess the uterine and ovarian growth without any risk of radiation.
- Uterine length and volume were more affected by age, weight and height of females than uterine width and anteroposterior diameter.
- No significant deference between right and left ovarian volumes.
- Age of menarche was more affected by uterine volume and anteroposterior diameter than uterine length and width.