

**Original Article**

**Morphological study of weight of the ovary at different age group in Bangladeshi people**

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**Abstract**

**Aims:** The morphological study was aimed to find out the ovarian weight in different age group in Bangladeshi people to increase the knowledge regarding weight variation in our population. **Subject & Methods:** This cross-sectional study was carried out on Sixty two postmortem tissue contain ovary and fallopian tube along with surrounding structures were collected from 62- female cadaver of different age group by block dissection and fixed in 10% formal saline solution. Gross and fine dissections were carried out to see the morphological parameter of weight of the ovary in different age groups. In the present study, findings were compared with findings of the other researchers. **Results:** Maximum mean weight of the right ovary is found in this study in group C (46-80) years is 5.78gm and minimum weight is found in group A (2-13 years) is 3.36gm. But in case left ovary Maximum in group B(14-45)years is 5.01 and minimum group a (2-13) is 2.72gm. statistical analysis significant different between two groups was calculated by using students "T"Test. In the present study it is observed that the weight of the ovary is not equal on both side of same individual.

**Key words:** ovary, morphology, weight

**Introduction**

The ovaries are a pair of female reproductive and endocrine glands, which are situated in the lesser pelvis on each side of the uterus and are attached to the posterior layer of the broad ligament below and behind corresponding uterine tube. The ovary has important gametogenic functions that are integrated with its hormonal activity. The mechanism responsible for the onset of ovarian function at the time of puberty is thought to be neural origin because the immature gonad can be stimulated by gonadotrophin already present in the pituitary, because pituitary is responsible exogenous hypothalamic gonadotrophin release hormone.

In the morphological study weight of the ovary is important parameter to determine the establishment of Bangladeshi standard ovarian weight in respect of age. Bangladesh is thickly populated small country and Mymensingh zone lies near the centre of the country. So the cadaver collected from the morgue of the Mymensingh medical college represent the

approximately the total population of the country.

Now a days, a larger number of people are suffering from ovarian disease eg: Ovarian tumour, ovarian carcinoma, and ovarian cyst etc, so a research work on ovarian weight is an undebatable requirement for the successful treatment of ovarian disease.

**Objectives**

- 1) To measure the weight of the ovary of Bangladeshi female at different age group.
- 2) To compare the weight of the ovary in Bangladeshi female with the other country.
- 3) To propose a weight standard for ovaries in different age in Bangladeshi female.

**Materials and methods**

The present study was done on sixty two ovaries of Bangladeshi cadaver at different ages. Specimen of ovaries were collected from dead bodies autopsied in the morgue of Department of forensic Medicine Mymensingh Medical college and the study was car-

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ried out in the Department of Anatomy, Mymensingh Medical college, Mymensingh. The weight of the ovary is not possible to measure in the living person. It is also impossible to collect the ovary from living person in normal condition. Ovaries are operated in abnormal condition such as tumour cyst, etc. But I have to measure the weight of the normal ovary. So it is always collected the ovary from cadaver. The cadaver is found in the morgue. In case of normal death it is impossible to collect the ovary in our country. The specimen of the ovaries was selected from the dead bodies which were collected within 24 hours after death.

All the collected specimen were from medico legal cases. Ovaries of decomposed body, grossly injured and poisonous cases were excluded from the study. The collected specimen were tagged with an identifying number representing individual serial numbers. From each cadaver the ovary and fallopian tubes are related neighboring structure were collected by Block dissection during routine post mortem examination. Then the collected Specimens were washed gently with saline water to remove the blood and blood clots as per as possible.

Each ovary was weight by means of scientific balance. The measurement was taken after fixation in to 10% formol saline. Before weighing the specimens, it was dried with tissue paper. The measured weight of ovaries was expressed in grams.

The age of the cadaver ranges from 2 years to 80 year. They(n=62) were divided into three groups eg: group A 2 to 13 years, group B 14 to 45 years and

Groups	Weight of right ovary (gm) Mean + SE	Weight of left ovary (gm) Mean +SE
A (2-13years)	3.36+0.50	2.72+0.52
B(14-45years)	4.93+1.94	5.01+1.51
C(46-80 years)	5.78+1.07	4.71+0.76
Level of significance	P<0.01	P<0.001

**Discussion:**

The ovary is small bean shaped or gan about 4-8 gms<sup>4</sup>.The total weight of the ovaries is 10-20 gms declining with age<sup>3</sup>.In the study adult weight that is 14-45 years the weight of the right ovary is 4.93gm and the left ovary is 5.01gm but Gavern HSD he shown that the weight of the ovary is 4-8gm which is close to my study. But keele CA shown the weight of the ovary which is more than my findings. Regarding the weight of the ovary research is very poor. Only the Gavern HSD and keele CA work on

group C 46 to 80years. All data were recorded in pre-designed data sheet from the specimen of each cadaver. The collected data were classified and analyzed statistically by ANOVA to find out the significance of deference in different age groups.

**Table: 1: Grouping of the sample in relation to age for the study of ovarian weight.**

Ethical approval: The study design and protocol was approved by Ethical Committee of Mymensingh Medical College, Mymensingh.

Groups	Age in years	Number of specimen
A	02-13	11
B	14-45	44
C	46-80	7
Total=	02-80	62

**Results**

In the present study it was found that weight of the right ovary was maximum in group C and minimum in group A. But in case of left ovary weight was found maximum in group B and minimum in group A.

In case of right ovary. Difference weight between group A vs B moderately significant but in case of left ovary this difference was highly significant. The difference was on both sides between group B vs C and group A vs C.

**Table 2 Weight of the ovary in difference age group.**

this ground. From birth to menarche, ovarian weight increase steadily due to increase volume of developing follicles and an increase in stroma at the mesnopause. In women after that ovarian atrophy occurs between the age of 45 to 50years, although it may set in earlier or later. The condition is associated with marked changes in the ovaries.They become smaller when the graaf fian follicles disappear and are replaced by fibrous tissue; ova, corpus luteum and the internal secretions of the ovary no longer formed<sup>3</sup>.Each weight 4-8gms, right tending to be larger than the left<sup>5</sup>.

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