INTRODUCTION

The cavity within the brain is ventricles filled with Cerebrospinal Fluid (CSF). The lateral ventricles are the largest paired ventricles present within the cerebrum; the third ventricle is in the diencephalon of the forebrain between the thalami; and the fourth ventricle is located posterior to the Pons and open part of the medulla oblongata of the hindbrain. Knowing the normal measurements of the cerebral ventricles in the living human has great importance in diagnosing and monitoring several pathologies. Materials and Methods: This study was carried out on 150 healthy subjects (75 females and 75 males) aged between eighteen and eighty-seven years between January 2021 and October 2022 in GSVM Medical College, Kanpur. Result: In our current study we observed the length of the right ventricle was 75.15 ± 8.5 mm, length of the left ventricle was 71.67 ± 6.8 mm, length of the right frontal horn of the lateral ventricle was 28.6 ± 5.3 mm, length of the left frontal horn of the lateral ventricle was 27.56 ± 5.6 mm, width of the 3rd ventricle was 4.8 ± 2.9 mm, height of the 4th ventricle was 8.9 ± 2.9, width of the 4th ventricle was 11.3 ± 9.8. Conclusion: The study provided valuable morphometric data about the lateral, third and fourth ventricles while diagnosing visual disturbance, hydrocephalus, schizophrenia, psychotic disorders and other pathologies.
MATERIALS AND METHODS

This study was carried out on 150 healthy subjects (75 females and 75 males) aged between eighteen and eighty-seven years between January 2021 and October 2022 in GSVM Medical college, Kanpur.

CT scan technique

CT scanning is ideally suited for 3D imaging and used in, for example, brain, cardiac, musculoskeletal, and whole-body CT imaging. The images can be presented as impressive coloured 3D rendered images, but radiologists usually rely more on black and white, 2D images, being either the 2D axial images or 2D reformats. The patient was placed on the CT table, and the head was centralised and supported for correct positioning and to avoid blurring of images. A lateral scout image was taken to confirm the correct positioning of the patient. The orbit-meatal line was drawn, and a line at an angle of 15 - 20 degrees to and 1 cm above it was drawn, representing the lowest tomographic section, which passed through the base of the skull. The total time of the CT scan was 20-30 seconds. A total of 8 to 10 sections was obtained without any overlap. All processing and measurement of axial CT images were performed in the ADW workstation.

Method

1) Lateral Ventricle
   Length of lateral ventricular body inclusive of the level of interventricular foramen. The frontal horn it was brought from tip of the frontal horn to the atrium.

2) Level of Interventricular Foramen
   • Length of frontal horns of the right lateral ventricle in mm (measured from its tip to the interventricular foramen).
   • Length of frontal horns of the left lateral ventricle in mm (measured from its tip to the interventricular foramen).

3) Level of third Ventricle
   • Greatest width of the third ventricle in mm can be seen

4) Level of Fourth Ventricle
   • Greatest height of the fourth ventricle in mm.
   • Greatest width of the fourth ventricle in mm

Statistical Analysis: Statistical analysis was performed by using computer based software, Statistical Package for Social Science (SPSS).

RESULTS

In our current study we observed the length of the right ventricle was 75.15 ±8.5 mm, length of the left ventricle was 71.67 ± 6.8 mm, length of the right frontal horn of the lateral ventricle was 28.6 ± 5.3 mm, length of the left frontal horn of the lateral ventricle was 27.56 ± 5.6 mm, width of the 3rd ventricle was 4.8 ± 2.9 mm, height of the 4th ventricle was 8.9 ± 2.9, width of the 4th ventricle was 11.3 ± 9.8 as show in table no 1. This valve was come from CT scan measurements.
**DISCUSSION**

In our current study, we observed the length of the right ventricle was 75.15 ± 8.5 mm while comparing our study with Honnegowda TM et al.[6] observed that the length of the right ventricle was 76.23 ± 9.4 mm their data was similar with our data. In our current study, we observed length of the left ventricle was 71.67 ± 6.8 mm while comparing our study with Honnegowda TM et al.[6] observed that the length of the right ventricle was 72.43 ± 9.4 mm their data was similar with our data. In our current study we observed the length of the right frontal horn of the lateral ventricle was 28.6 ± 5.3 mm, While comparing it from Honnegowda TM et al.[6] observed that the length of the right frontal horn of the lateral ventricle was 30.54 ± 3.72 mm. In our current study we observed length of the left frontal horn of the lateral ventricle was 27.56 ± 5.6 mm, While comparing it from Honnegowda TM et al.[6] observed that the length of the left frontal horn of the lateral ventricle was 28.7 ± 2.9 mm.

In our current study, we observed that the width of the 3rd ventricle was 4.8 ± 2.9 mm another study of Honnegowda TM et al.[6] observed that the width of the 3rd ventricle was 5.8 ± 2.1 mm, another study of Moawia Gameraddin et al.[7] observed that the width of the 3rd ventricle was 5.57 mm which was similar with our study. In our current study we observed that the height of the 4th ventricle was 8.9 ± 2.9; another similar study of Moawia Gameraddin et al.[7] observed that the height of the 3rd ventricle was 9.68 mm another study of D'Souza and Natekar,[8] revealed that the height of the fourth ventricle was 11.8 mm and 11.1 mm for the male and female respectively which was similar with our study.

In our current study we observed that the width of the 4th ventricle was 11.3 ± 9.8 another study of Moawia Gameraddin et al.[7] observed that the width of the 4th ventricle was 12.5 mm.

**Limitations**

One of the maximum obstacles to this examine, no volunteers are carried out because x-rays have organic consequences and hazards. Many instances have been excluded from the examination because of minor pathological adjustments within the mind that could impact the measurement. So, we attempted to discover photos with ordinary mind appearances for as long as possible.

**CONCLUSION**

The study provided valuable morphometric data about the lateral, third and fourth ventricles while diagnosing visual disturbance, hydrocephalus, schizophrenia, psychotic disorders and other pathologies.

**REFERENCES**


