

was found to have a  $8 \times 6$  cm size, soft, skin covered mass protruding through a 4 cm cranial defect in the occipital area.

**Conclusion:** Ultrasound during the first trimester of pregnancy helps to identify these cases early, which enables counselling the parents for taking wise decision regarding termination of pregnancy and reducing physical and psychological stress to the family.

#### Conflicts of interest

The authors have none to declare.

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#### Persistent Mullerian duct syndrome—a case report



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**Introduction:** Persistent Mullerian duct syndrome (PMDS) is a rare autosomal recessive disorder which could present as male pseudohermaphroditism [DSD] in which Mullerian duct derivatives are seen in a male patient. This syndrome is characterized by the persistence of Mullerian duct derivatives (i.e. uterus, cervix, fallopian tubes and upper two thirds of vagina) in a phenotypically and karyotypically male patient. The syndrome is caused either by an insufficient amount of Mullerian inhibiting factor (MIF????) or due to insensitivity of the target organ to MIF. Familial cases have been reported with a probability of sex-limited autosomal recessive or X-linked recessive inheritance. A review of the literature showed only few case reports from India including familial cases.

**Aim of this study:** The aim of presentation of this rare case of persistent mullerian duct syndrome is to outline management of such case when encountered unexpectedly while operating on inguinal hernia. More so this possibility should be kept in mind while operating on a case of cryptorchidism.

**Case:** We report our case a 28 yrs male patient who has presented with bilateral undescended testis with left sided Hydrocele. On laparotomy, he was found to have uterus and fallopian tubes and upper part of vagina (Mullerian duct derivatives), round ligaments and bilateral gonads (testis) in the abdomen. Testicular biopsy showed sertoli cell only syndrome with no evidence of malignancy. Semen analysis showed azoospermia. The facts about this rare interesting case of Persistent Mullerian Duct Syndrome will be discussed in detail at the conference.

**Conclusion:** This is a rare presentation of persistent mullerian duct syndrome reported few and far in literature. The surgeon operating on inguinal hernia in a cryptorchid patient, need to be aware of management of this condition, when encountered in an emergency situation. The future fertility of the patient need to be kept in mind and counselling before performing the definitive surgery is essential to prevent future litigation.

#### Conflicts of interest

The authors have none to declare.

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#### Bilateral carotico-clinoid foramen in adult human cadaver and its surgical implications—a case report



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**Objectives:** This study aims to provide a guide to the detailed anatomy of carotico-clinoid foramen and its content can increase the success of diagnostic evaluation and skull based surgical approach by neurosurgeons. The ossified carotico-clinoid ligament is anatomically important due to its relations with the cavernous sinus and its contents, sphenoid sinus and pituitary gland. The existence of a bony compression, tightening or stretching of the internal carotid artery, causing induced headache in patients. It may also cause several endocrinological problems being located very close to hypophysis.

**Methods:** During routine osteology teaching for the undergraduates in the Department of Anatomy, ESI-PGIMS, Joka, Kolkata, it was noticed in one dry skull of unknown age and sex that ossification reaches anterior and middle clinoid processes forming a bilateral foramen carotico-clinoidium. Digital Vernier calliper was used for the measurement of antero-posterior and transverse diameters of the foramen on both sides.

**Results:** On the right side, the anteroposterior diameter was 3.13 mm and transverse diameter was 5.01 mm. The corresponding values on left side were 4.23 mm and 5.52 mm. There was no fusion between anterior and posterior or between middle and posterior clinoid process on either side. The bilateral carotico-clinoid foramen which were circular in shape with smooth outline were located antero-lateral to sella turcica, medial to superior orbital fissure and behind the optic nerve on both sides. The length of the bony bar between the anterior and middle clinoid process was 2.1 mm on left side and 2.8 mm on right side.

**Conclusion:** Surgical removal of the anterior clinoid processes in ophthalmic segment aneurysms of Internal carotid artery, carotico-clinoid fistula and tumours like tuberculoma, meningiomas located in the para-clinoid region and cavernous sinus is more difficult when the carotico-clinoid ligament is ossified due to established neural and vascular relationships (oculomotor, trochlear, abductor, ophthalmic and mandibular nerves, internal carotid artery, cavernous sinus and coronary sinus) as drilling of anterior clinoid process may also cause inadvertent injury to optic nerve. This study can also help to evaluate pneumatization of the anterior clinoid process preoperatively with computed tomography and carotid angiograms to avoid complications such as rhinorrhoea and pneumocephalus because in 60% of anterior clinoid processes are pierced by narrow venous canals arising from the cavernous sinus and traversing through the clinoid space and are a potential source of bleeding during removal of the anterior clinoid process.

#### Conflicts of interest

The authors have none to declare.

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