

Embryology 30 Hrs.
Lectures of embryology 2nd year
GENERAL EMBRYOLOGY

- 1. Introduction –Definition of medical embryology
Introducton to molecular regulation & signaling** 1
- 2. Gametogenesis :Conversion of germ cells into
male& female gametes.**
- Chromosomes during mitosis &meiosis** 1
- Non disjunction**
- 3.Morphological changes during gamete maturation .** 1
- prenatal oogenesis**
- postnatal oogenesis**
- 4.Spermatogenesis -Spermiogenesis –Abnormal gamete –
Ovulation .** 1
- 5.Fertilization 1st week of development :-ovarian cycle** 1
- corpus luteum ,phase of fertillzatoin 1,2,3, cleavage ,
blastocyst formatiron ,
preparation of uterine endometerium to recieve the
blastocyst.**
- 6. 2nd week development**
- Day 8 ,9 ,11-12 & 13 . clinical correlates ,abnormal
implantation**
- 7. 3rd week development**
- Gastrulation ,primitive streak ,notochord .**
- Further development in trophoblast. Secondary
& tertiary villi** 1
- 8.Differentiation of germ layers ,ectoderm**
- Formation of neural tube and neural crest**

Formation of auditory & lens placodes .

9.Differentiation of mesoderm ,paraxial mesoderm and their derivatives ,intermediate mesoderm & derivatives .

Lateral plate mesoderm

Somites differentiation . Blood& blood vessels

1

10.Endoderm

Head fold ,tail fold ,vitelline duct ,primitive gut .

External appearance during The 2nd month

Fetal period 3rd month –birth

1

11.Formation of deciduas ,fetal membrane & development of placenta .

Amnion &chorion .

Umbilical cord .

Function of placenta .

Twins .

2

12 .Congenital malformation .

Incidence & etiology

1

SYSTEMIC EMBRYOLOGY

13.Skeletal system

Skull ,skull abnormalities

1

Limbs ,limbs abnormalities

Vertebral column ,vertebral column abnormalities .

14. Muscular system

Smooth ,straiated ,&cardiac muscles .

1

15 .Body cavities & serous membranes .

16.Cardiovascular system

Pharyngeal arches
Pharyngeal pouches
Tongue
Thyroid gland
Cleft lip & palate

22. Eye & ear

Optic cup , lens vesicle **1**
Retina ,iris ,culinary body &lens
Internal ear ,middle &external ear .

23. Central nervous System **1**

Skin -spinal cord
-Brain
-Clinical Correlates

24 - Epidermis & dermis

Hair
Mammary gland .