BEEJ, BEEJBHAGA, BEEJBHAGAVAYAVA.

PRESENTER

APSARA

***BAMS* 1ST YEAR**

ROLL NO. TEN

बीज

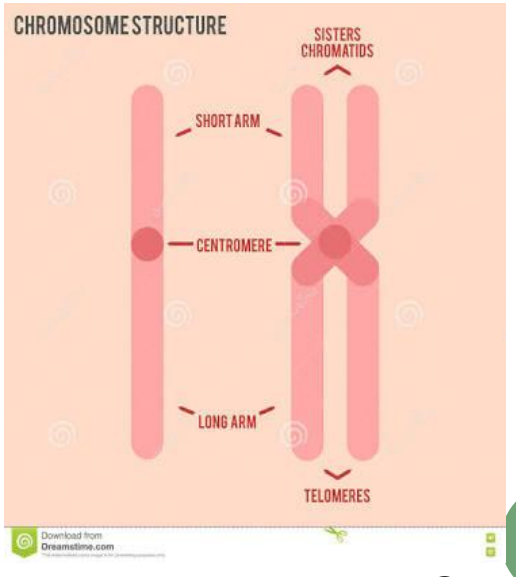
- ***Beej*** is the basic substance which has minute hidden precursor of future progeny.
- बीज इति शुक्रशोणित| (च.शा.3/17)

Beej refers to the male pronucleus (sperm) and female pronucleus (ovum).

- पुंबीज – ***Shukra***- sperm- contributes paternal inheritance to the progeny.
- स्त्रीबीज- ***Shonita-*** ovum- contributes maternal inheritance to the progeny.

बीजभाग

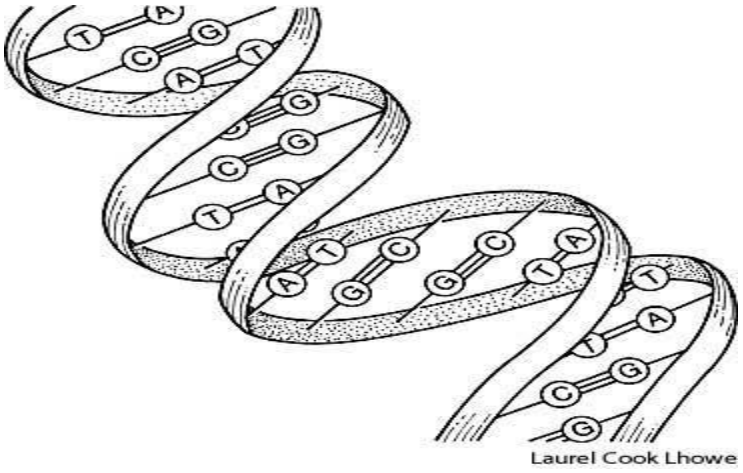
- बीजस्यंग प्रत्यंग निर्वतत्को भागो बीज भाग:|
  (चक्रपाणि.च.शा.3/13)
- The ***Beejbhaga*** are the component lying inside the ***beej*** and holds responsibility of development of different organs in the body.



बीजभागावयव

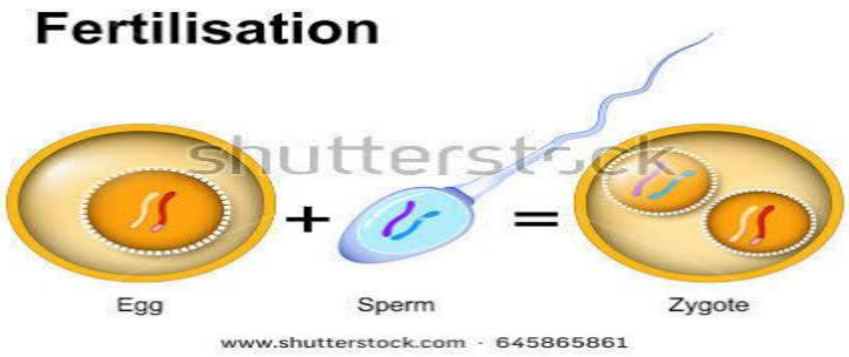
- मनुष्यबीजं हि प्रत्यङ्गबीजभागसमुदायात्मकं स्वसदृशप्रत्यङ्गसमुदायरूपपुरुषजन्मकम्| (चक्रपाणि.च.शा.3/17)

- The ***beejbhagavayava*** is a more subtle stage of ***beejbhaga*** carrying instructions for our individual characteristics.



❖यस्य यस्य ह्यङ्गावयवस्य बीजे बीज भाग उपतप्तो भवति, तस्य तस्याङ्गावयवस्य विकृतिरुपजायते, नोपजायते चानुपतापात्(च.शा.3/17)

- The part of the seed responsible for the formation of the particular organ, if vitiated, will result in the vitiation of the respective organ.



➢ Requirements for the development of fetus.

- गर्भस्य चत्वारि चतुर्विधानि भूतानि मातापितृसम्भवानि| आहारजान्यात्मकृतानि चैव सर्वस्य सर्वाणि भवन्ति देहे (च.शा.2/26)

- The development of fetus requires the four ***Mahabhutas*** along with ***Matraj*** (ovum), ***Pitraj*** (sperm), ***Rasaj*** (diet) and ***Atmaj***(soul).

➢ गर्भविकृति

- बीजात्मकर्माशयकालदोषैर्मातुस्तथाऽऽहारविहारदोषैः|
  कुर्वन्ति दोषा विविधानि दुष्टाः संस्थानवर्णेन्द्रियवैकृतानि(च.शा.2/29)
- Owing to defect in seeds, action associated with the souls and previous deeds, uterus, time and food as well as the regimen of the mother, ***Doshas*** get vigorously vitiated and this results in impairment of the shape, color and sensory as well as motor organs of the offspring.

➢गर्भाविकृति व्याधि

- According to ***Acharya Sushruta*** ***Garbhavrikti Vyadhi*** has been classified as follows;

- **आदिबलःप्रवृतः** diseases which are congenital in origin and genetically determined are caused by the vitiation of ***Beej.***

  1- मातृज

  2- पितृज

- **जन्मबल प्रवृतः** Vitiation of ***Beeja*** is caused by wrong diet and regimen of the mother.

  1 – रसकृता

  2- दौह्रदापचारकृत

- यस्य यस्य ह्यवयवस्य बीजे बीजभागे वा दोषाः प्रकोपमापद्यन्ते, तं तमवयवं विकृतिराविशति|(च.शा.4/30)

- vitiation of maternal ***Beejbhaga*** = birth of Sterile child
- vitiation of maternal ***Beejbhagvyava*** = ***Puti praja*** (dead foetus)
- vitiation of maternal ***Beejbhagnamekdesh*** = ***Varta***
- vitiation of paternal ***Beejbhaga*** = birth of Sterile child
- vitiation of paternal ***Beejbhagvyava*** = ***Puti praja*** (dead foetus)
- vitiation of paternal ***Beejbhagnamekdesh*** = ***Trinaputric.***

➢MODERN CONCEPT OF GENETICS

- **Sperm :**
  - ✓ Male gamete which is produced in the male gonad, testis.

- **Ovum:**
  - ✓ Female gamete which is produced in the female gonad, ovary.

- **chromosome:**
  - ✓ During cell division the chromatin network in the nucleus become condensed into a thread or rod like structure.
  - ✓ They are 46 in number (23 pairs).
  - ✓ However it is only haploid in the sperm and ovum ,i.e 23 in numbers and each of them is made up of Deoxyribonucleic acid.

Gene :

- Gene, the functional unit of DNA, is the basic unit of heredity in living organisms. It holds information to maintain an organisms cell and pass genetic traits to offspring.

Autosome and sex chromosome:

- ✓ They are 46 in number in each cell and again divided into 44 autosome and 2 sex chromosomes. They are X and Y.
- ✓ Presence of Y chromosome leads to maleness regardless of number of X chromosome present, absence of Y chromosome results in female development.

PHASES OF INTRAUTERINE GROWTH.

- 1. **Zygote phase-** (1 to 2 weeks)- when sperm fuses with ovum.
- **2.Embryo phase-**(3 to 8 weeks) –most of the organ system develops.
- 3. **Fetal phase-**(9-38 weeks) – further growth and organ system develop.

- **Congenital abnormalities:**

  It is also known as congenital diseases or defect .

- **Genetical disorder:**

  A genetic problem caused by one or more abnormalities in genome , especially a condition present at the birth.

- **Fetal abnormalities :**

1. **Sterility**: Inability to produce offspring.
2. **Klinefelter's syndrome-** (47XXY) an abnormal male syndrome.
3. **Turner's syndrome**- (45X) , an abnormal female phenotype.
4. **Down syndrome-** Here,there is trisomy of chromosome 21. The number of chromosome is 47 i.e 47XX/47XY.
5. **Super female-** (Trisomy X/XXX syndrome).
6. **Super male-** (44+XXY).

Conclusion

- ***Shukra Beeja*** is sperm and ***Shonita Beeja*** is ovum.
- ***Beejbhaga*** is central part of sperm or ovum.
- ***Beeja bhagavayava*** is correlated with gene.


THANK
YOU
return