CYSTIC Fibrosis

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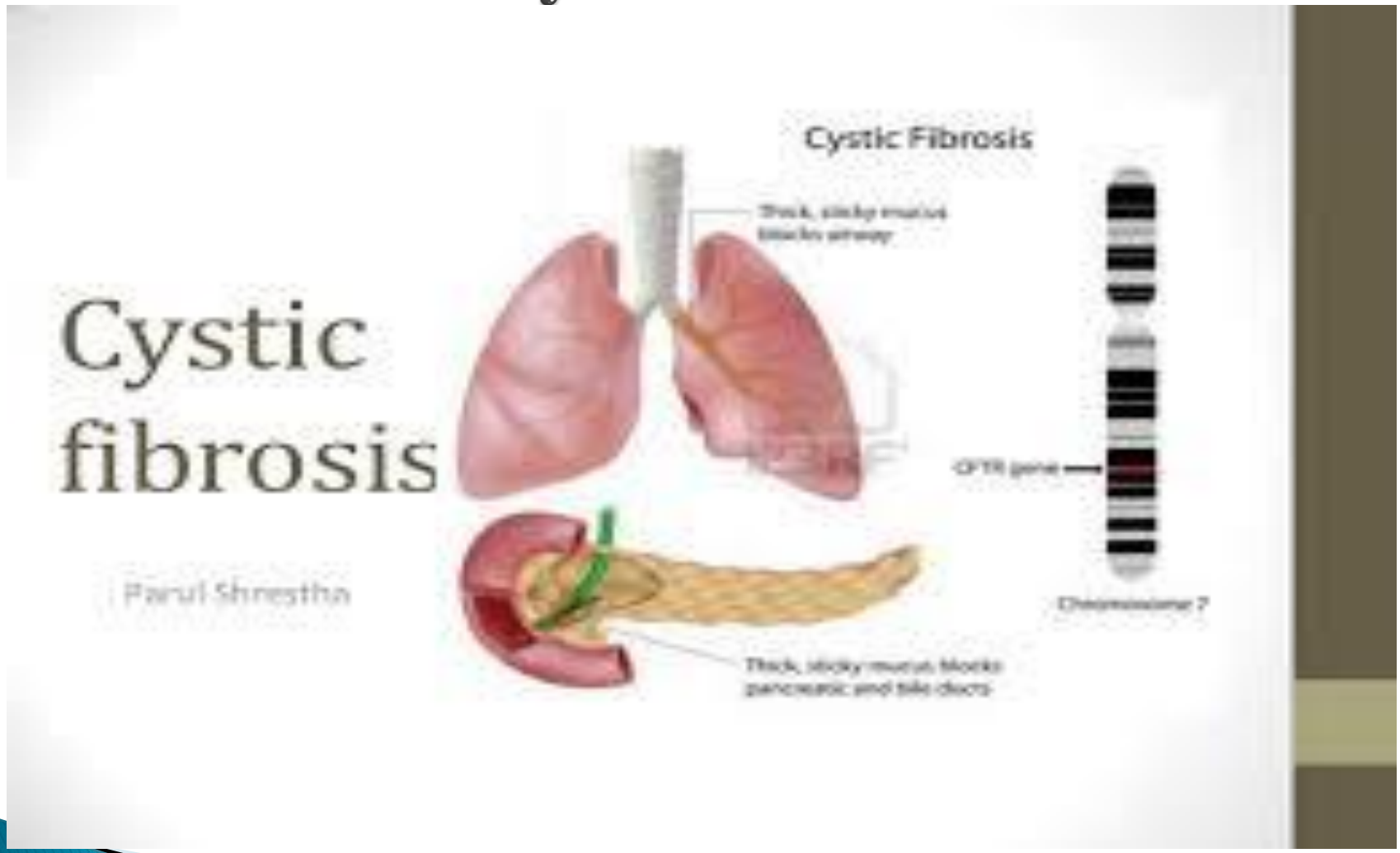
What is Cystic fibrosis

- Cystic fibrosis (CF) is an inherited disorder that causes severe damage to the lungs, digestive system and other organs in the body.
- affects the cells that produce mucus, sweat and digestive juices.
- Cystic fibrosis transmembrane regulator (CFTR) is a cell protein to manage the outflow of water and salts in the body, which is impaired with CF.

Pathophysiology

- The mutations of CFTR genetic coding of the couple result in abnormalities of cyclic adenosine monophosphate (cAMP).
- Epithelial cells do not favor mutation and increase the risk of abnormalities and defective framework.
- The performance of CFTR is related to chloride transport, and abnormal CFTR protein results in unmanaged electrolytic balance.
- This caused reduced hydration and production of thick and viscous mucus encouraging bacterial growth, severe infections, pulmonary inflammation, pancreatic abnormalities, gastrointestinal disorder, cholelithiasis, and hepatic cirrhosis (Ong et al., 2017).

Cystic Fibrosis



Symptoms of Cystic Fibrosis

- One of the first signs of cystic fibrosis is a strong salty taste to the skin. Parents of children with cystic fibrosis have mentioned tasting this saltiness when kissing their children.
- Other symptoms of cystic fibrosis result from complications that affect:
- the lungs
- the pancreas
- the liver
- other glandular organs

Study results

- A cohort analysis of 59 CF carriers was matched with the related subjects, and 57 out of 59 were found with higher odd ratios with increased prevalence rates of bacterial infections, chronic pancreatitis, and male infertility (Nelson et al., 2016).
- The carriers contain the secretion of β-adrenergic agonists to stimulate epithelial cells with mucosal layers (surface).
- Abnormal CFTR function is associated with secretion of chlorine and bicarbonate anions, but additional analysis is yet to be done for the relevant profile of these anions with organ failure.

Treatment of cystic Fibrosis

- Antibiotics may be prescribed to get rid of a lung infection and to prevent another infection from occurring in the future. They're usually given as liquids, tablets, or capsules. In more severe cases, injections or infusions of antibiotics can be given intravenously, or through a vein.
- A lung transplant involves removing a damaged lung and replacing it with a healthy one, usually from a deceased donor. The surgery may be necessary when someone with cystic fibrosis has severe breathing problems. In some cases, both lungs may need to be replaced. This can potentially lead to serious complications after surgery, including Pneumonia

Conclusion

- Cystic fibrosis cannot be prevented. However, genetic testing should be performed for couples who have cystic fibrosis or who have relatives with the disease. Genetic testing can determine a child's risk for cystic fibrosis by testing samples of blood or saliva from each parent. Tests can also be performed on you if you're pregnant and concerned about your baby's risk.

References

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