
The Reasons Of Esophageal Varices

Increment in death rate has gone past wild measure. Most occasions sickness is one of the explanation for this condition. I consider how this world would have been if without specialists and researchers. The developing of Ebola infection would have been the ongoing major crushing reason for death in the universe. At any rate I won't quit expressing gratitude toward the individuals who made it as their purpose of obligation to anchor life by finding the reason for illness through proffering a conceivable arrangement that will obstruct the rate of sickness augmentation.

Today, I will expand on another topic, wireless ingestible bacteria on a chip, how it tends to be connected in esophageal varices and peptic ulcer. Do you realize that most occasions the motivation behind why increment in death rate has expanded more than anticipated may redundant be related with the infection itself but rather its manifestations. It might sound so unusual yet that is reality. Wireless ingestible bacteria on a chip is a new discovery designed to detect the hemorrhage caused by a disease in the body by sending signal into a transducer where it can be detected using computer in a screen. This ingestible bacteria has a unique function which made it so extraordinary due to its function in identification of malady. Before we plunge into the mechanism of this gadget. It will be more justifiable to clarify an illness condition and how it tends to be connected. Let me rapidly without accentuation convey to your notice on a point called esophageal varices and peptic ulcer. Go along with me as I move down to give a point by point clarification.

Esophageal varices

I will get a kick out of the chance to begin by giving a basic definition on words which might jumble why clarifying what esophageal varices is about. Cirrhosis: this is a disruption of normal liver structure. This disruption may result to regenerative nodules leading to liver chronic condition. Abnormalities in liver are caused by hepatic infection, a bile disorder and alcoholic liver disease. Thrombosis: it is a blockage of artery by blood clot. This blockage in artery may also be a result of increase in cholesterol level accumulated in the wall of artery.

Returning to our point esophageal varices

This is an abnormal condition that occurs when there is increase in size of the veins that connect the throat and stomach. This condition is as a result of liver disease. Most times you find out that the passage of blood into the liver are obstructed by a clot or as a result of scar tissue in the liver. Wiki commons by samir under~ CC BY-SA 3.0 A block in the passage of blood flow into the liver leads to the diversification of blood into smaller vessels which are not strong enough to carry large quantity of blood. An entrance of blood into such vessel results to rupture of the vessel that leads to uncontrollable bleeding. Emergent of esophageal varices may be due to liver cirrhosis or other underlying factors associated with blood passage into the liver such as thrombosis and parasitic infection. Another exceptional thing about esophageal varices is its capacity to cause sudden passing of a person because of inner draining caused because of break in the vein. This condition can likewise result to working up of liquid in your stomach area and yellow shading of your skin and eyes.

Most times people diagnosed of esophageal varices always see trace of blood during vomiting which is accompanied with loss of consciousness. High entrance vein weight, vast varices and red stamp on the varices is dependably a sign of interior seeping in esophageal varices which if care isn't taken can prompt passing. If liver disease is diagnosed in a patient which is caused due to esophageal varices, it is always advisable for such person to stop increase in the intake of alcohol and maintain a healthy eating habit like plant based diet which contain fruits and vegetables. Now, I will get a kick out of the chance to bounce into another intriguing point called peptic ulcer and how it influences the body.

In this theme you will comprehend a solitary likeness which is basic to esophageal varices and peptic ulcer and why this ingestible microorganisms on a chip might be suggested. Peptic ulcer can say that peptic ulcer is another name for open sores in the stomach or the upper side of the intestine. Reason being that open sores in such part is what is regarded as peptic ulcer. This condition may be asymptomatic due to it's silent nature of penetrating the body. Blaus under~CC BY-SA 3.0 Do you know that that peptic ulcer is one of the underlying causes of internal bleeding, which if care is not taken can lead to transfusing of blood to such individual. Come to think of it, peptic ulcer is caused when there is damage of the wall of the stomach by the digestive juice such as HCl and other substances. This damage in the wall of the stomach is as a result of helicobacter pylori or excessive increase in the intake of pain relieve drugs.

Helicobacter pylori

This is a bacteria known to cause ulcer in the body. It is found mostly in 50% of an individual. Most people who are infected with this bacteria does not get ulcer but in others, it term to trigger an increase in the amount of acid found in the stomach. In such case there is always a break down in the mucus layer and irritation In the digestive tract. This bacteria can as well be gotten from contaminated food and water which may be regarded as the source of getting infected by this disease.

Another most devastating cause of peptic ulcer is high intake in pain relieve such as aspirin, ibuprofen and naproxen. This drugs prevents the production of chemicals that helps to prevent inner walls of the stomach from acid damage. Smoking and drinking of alcohol can also lead to high chances of getting ulcer. Presence of ulcer in the body is always noticed when you start experiencing pain and the presence of blood in the faeces. This disease can be diagnosed using endoscopy method, where a tube is passed through your throat down to the stomach. This tube has a camera to indicate if there is presence of ulcer in the body. An ulcer caused as a result of helicobacter pylori can be controlled using antibiotics, why the one caused as a result of high intake of NSAID(pain killer)can be managed by reducing the high in take of this medicine. Haven't understood esophageal varices and peptic ulcer, it will be nice to relate it with the wireless ingestible bacteria on a chip and how this device can be use to prevent death of an individual.

Simply take a gander at this

Like I said earlier, esophageal varices and peptic ulcer has one thing in common. Which if you have gone through it carefully you must have understood this similarity. An ingestible bacteria on a chip is a wireless sensor equipped with a species of bacteria which helps to diagnose stomach bleeding or other gastrointestinal problems. This bacteria on a chip in combination with

a sensor produced from a living cells with ultra-low-power electronics convert bacteria response into wireless signal. This signal can now be accessed using computer. According to Timothy Lu an MIT associate professor. Combining engineered biological sensors together with low-power wireless electronics, we can detect biological signals in the body and in near real time, enabling new diagnostic capabilities for human health application. This sensor does not only detect biological signals, it also has light equipped on it that helps to send signal when gastrointestinal bleeding is discovered by combining with electronic chip that will translate the bacteria response into wireless signal.

On the note made by nadeau he stated that, Our idea was to package bacteria cells inside a device. The cells would be trapped and go along for the ride as the device passes through the stomach. One good thing about this sensor is that, after you must have finished placing bacteria into the well of the sensor covered with a semipermeable membrane material. It has a small hole that allows diffusion of liquid molecule inside the sensor which helps in trapping the presence of blood in the intestine. This sensor is about 1.5 inches long and has 13 micro watts of power. It also contain 2.7 volt battery which could help to power the device for about one and half months. One different thing between this device and endoscopy method is that endoscopy requires the patient to be sedated why this wireless sensor is ingested as a capsule which within a couple of minutes indicates if there is presence of bleeding in the intestine.

How can this device be of help in esophageal varices and peptic ulcer

Esophageal varices and peptic ulcer is a disease known to cause internal bleeding. Most times this intestinal bleeding may result to a serious decrease in the blood level which might eventually lead to the death of the patient. This bacteria on a chip device helps to diagnose the presence of internal bleeding in the persons body using light sensor through sending the signal into a computer. It is also Incorporated with a particular species of bacteria called Escherichia coli which express a genetic circuit that enable the bacteria to emit light when they encounter blood. So with this device most death caused as a result of bleeding of the intestine such as peptic ulcer and esophageal varices and other intestinal bleeding diseases can be tamed.

Can this bacteria on a chip be acceptable

This gadget is set up to spare life and not to cause hurt. What's more, it has been tried and endorsed that it can go far to help the general public in diminishing the rate of mortality related with inside dying, I subsequently trust that it will go far in diminishing death rate.

Conclusion

I can never stop thanking those people who devoted their time and energy to see that the world is gradually developing and also making sure that the rate of death in the world are decreasing. This bacteria on a chip device is a device that will go a long way to reduce the rate of mortality in the world through detecting of internal bleeding caused by esophageal varices, peptic ulcer and other gastrointestinal related bleeding.